

# ***Staff Paper***

## **1998 Business Analysis Summary for Dairy Farms**

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# 1998 BUSINESS ANALYSIS SUMMARY FOR DAIRY FARMS

## 1998 Michigan Telfarm/MicroTel Data

Staff Paper No. 99-37, 59 pages

by

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### Introduction

The body of this report is organized as follows:

#### I. Introduction and Table of Contents

- A. List of Tables
- B. Data Source
- C. Per Unit Income and Expense

#### II. List and sequence of Tables for 1998

- A. Averages of 154 Dairy Farms, All Sizes
  - 1. Livestock and Crop Production Summary..... Page 4
  - 2. Farm Income Statement..... Page 5
  - 3. Farm Income Statement, continued..... Page 6
  - 4. Inventory Changes..... Page 7
  - 5. Depreciation and Other Capital Adjustments ..... Page 8
  - 6. Profitability and Liquidity Analysis..... Page 9
  - 7. Balance Sheet at Cost Values..... Page 10
  - 8. Balance Sheet at Market Values..... Page 11
  - 9. Statement of Cash Flows ..... Page 12
  - 10. Financial Guidelines Measures ..... Page 13
  - 11. Operator Information and Nonfarm Summary ..... Page 14
- B. Averages of 38 Dairy Farms, 20 to 75.9 Milk Cows ..... Page 15  
Same tables as above, numbered Table 12...22
- C. Averages of 32 Dairy Farms, 76 to 120.9 Milk Cows ..... Page 26  
Same tables as above, numbered 23...33
- D. Averages of 36 Dairy Farms, 121 to 200.9 Milk Cows ..... Page 37  
Same tables as above, numbered 34...44
- E. Averages of 48 Dairy Farms, 201 to 1,400 Milk Cows ..... Page 48  
Same tables as above, numbered 45...55
- F. 56. Per Unit and Expense (139 Farms) ..... Page 59

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## Data Source

Farm types were assigned using the 1992 Census of Agriculture's Standard Industrial Classification (SIC) definitions. Basically, any farm with 50 percent or more of value of farm sales from one item becomes a farm of that type. Dairy farms have 50 percent or more of value of combined sales from milk and cull dairy animals.

This report is a summary of the financial and production records kept by dairy farmers enrolled in the Telfarm/MicroTel record program through Michigan State University Extension., or were accounting clients of AgriSolutions in Michigan, or of Salisbury Management Services in Michigan, or of Farm Credit Services of Escanaba. Farm records were included if a Finan<sup>2</sup> summary was completed on 1998 data including beginning and ending balance sheets, plus income and expenses. The summary was included if cash discrepancy was less than 10% of gross cash inflow, and if the debt discrepancy was less than \$1,000. The averages are reported in the tables below; it should be recognized that considerable variability exist in the data. The unweighted mean of the net farm income for the 154 farms was \$115,246; the standard deviation of the mean was \$170,951 and the median was \$71,975. The unweighted mean of cows was 194 cows; the standard deviation of the mean was 204 cows and the median was 139 cows. The unweighted mean of pounds of milk sold per cow was 19,808 pounds; the standard deviation of the mean was 3,669 pounds and the median was 19,926 pounds.

This report has three purposes: 1)to provide statistical information about the financial results on dairy farms during 1998; 2)to provide production costs for comparative analysis and forward planning; and 3)to provide information on the trends in resource use, income and costs during the last few years. For dairy farm averages for 1995, see Staff Paper No. 96-86, Michigan Farm Database, New Directions for 1995; it contains averages of 106 dairy farms calculated with Finansum. Staff Paper No. 97-31, Business Analysis Summary for Dairy Farms, contains averages of 146 dairy farms for 1996. Staff Paper No. 98-29, 1997 Business Analysis Summary for Dairy Farms, contains averages of 132 dairy farms for 1997. These staff papers are available from the author.

Finansum allows rapid analysis of group averages with some degree of choice over how the results are presented. I prefer to show the average of the high or low 25 percent by net income, but only if the 25 percent means 6 or more farms. The farm was accepted in the average regardless of whether the farm was a proprietorship, partnership, limited liability company, or corporation. Finansum will produce a variety of report options; I included a subset in this publication.

The farms included in the averages below are not a random sample. They kept their financial records with Michigan State University's Telfarm/MicroTel accounting project, or had their accounting supervised by AgriSolutions, or by Salisbury Management Services, or Wisconsin Farm Credit Services' Escanaba office. A higher percentage of these farms use debt capital than do all farms in the state. The averages may be representative of bigger and better managed dairy farms.

This document may be found and downloaded from the following:

<http://www.msu.edu/user/nott>

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<sup>2</sup> Finan = financial analysis, one of the parts of Finpack, a financial software package from the Center for Farm Financial Management at the University of Minnesota.

Table 1. **Livestock and Crop Production Summary, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25 % )))))))))	Average Of High 25 % )))))))))
Dairy			
Number of farms	154	39	39
Avg. number of Cows	194.2	137.7	348.4
Milk produced per Cow	20,952	18,979	22,167
Percent of barn capacity	98.9	93.7	96.3
Avg. milk price per cwt.	15.26	15.35	15.21
ACREAGE SUMMARY			
Crop Acres Owned	365	315	593
Crop Acres Cash Rented	257	214	330
Crop Acres Share Rented	2	5	-
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	2.02	-	1.79
Soybeans per bu.	5.57	5.67	5.59
Wheat, Winter per bu.	2.29	2.54	2.25
AVERAGE YIELD PER ACRE			
Corn (bu.)	114.06	96.89	127.10
Hay, Alfalfa (ton)	3.87	3.32	4.01
Corn Silage (ton)	14.03	12.14	15.93
Haylage, Alfalfa (ton)	6.14	5.46	6.63
Soybeans (bu.)	44.99	-	44.46
Hay, Native Grass (ton)	2.08	2.27	-
Wheat, Winter (bu.)	47.37	45.92	48.37
Haylage, Mixed (ton)	6.63	-	-

Table 2. **FARM INCOME STATEMENT, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	154	39	39
CASH FARM INCOME			
Green Beans	37	-	145
Cordwood	41	45	-
Corn	6214	6346	3823
Corn Silage	237	-	436
Seed Corn	15	8	-
Alfalfa Hay	27	-	99
Mixed Hay	471	154	736
Alfalfa Haylage	73	286	-
Mixed Haylage	171	-	288
Maple Syrup	0	-	-
Oats	129	457	36
Popcorn	100	-	397
Potatoes	5	22	-
Sorghum Silage	3	-	10
Soybeans	6510	6804	8960
Straw	34	13	7
Sugar Beets	548	-	1748
Winter Wheat	1954	1871	3253
Miscellaneous crop income	0	-	-
Beef Calves	9	18	-
Background Beef	472	-	140
Milk	620735	401395	1174999
Dairy Calves	2673	2068	5096
Dairy Heifers (for sale)	23	54	-
Dairy Replacement Heifers	849	96	2508
Dairy Steers	8544	5830	11975
Raised Hogs	9	-	34
Finish Feeder Pigs	1	-	-
Foals	19	-	-
Cull breeding livestock	20511	12677	38403
Misc. livestock income	47	-	79
Transition payments	1094	1739	1785
CRP payments	109	-	430
Other government payments	17323	12554	29302
Custom work income	6361	675	17906
Patronage dividends, cash	3206	3112	5705
Insurance income	1906	2672	1831
Cash from hedging accts	-213	-	-839
Other farm income	7421	6111	15201
Gross Cash Farm Income	707667	465006	1324492

Table 3. **FARM INCOME STATEMENT, 1998 (Continued)**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	154	39	39
<b>CASH FARM EXPENSE</b>			
Seed	14141	10442	20563
Fertilizer	26050	17557	40809
Crop chemicals	12094	8784	18940
Crop insurance	374	751	148
Drying fuel	284	301	243
Irrigation energy	128	-	134
Crop marketing	452	449	196
Crop miscellaneous	964	300	1707
Feeder livestock purchase	352	-	1374
Purchased feed	162402	113585	305788
Breeding fees	4623	2435	9437
Veterinary	21709	15359	38583
Livestock supplies	25369	16888	50208
Livestock leases	2369	4008	1772
Livestock marketing	20169	11802	36905
Interest	37712	35858	57820
Fuel & oil	11589	8821	17510
Repairs	37516	26500	60798
Custom hire	13916	9359	24737
Hired labor	84475	56990	165916
Land rent	20633	14958	35976
Machinery & bldg leases	10496	7624	24286
Real estate taxes	6687	5834	9185
Personal property taxes	145	34	371
Farm insurance	7957	8069	11421
Utilities	14565	11306	25397
Dues & professional fees	4174	3138	6406
Hedging account deposits	1023	57	-
Miscellaneous	27960	14514	58673
Total cash expense	570326	405722	1025304
Net cash farm income	137341	59284	299189
<b>INVENTORY CHANGES</b>			
Crops and feed	7144	-13646	33858
Market livestock	-661	-1005	704
Accounts receivable	8797	4189	19952
Prepaid expenses and supplies	7175	2398	16647
Accounts payable	6946	3295	14040
Total inventory change	29401	-4770	85200
Net operating profit	166743	54514	384389
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	8703	-10797	26598
Machinery and equipment	-37714	-26542	-63799
Buildings and improvements	-18506	-15444	-29715
Other farm capital	-4811	-650	-17624
Total depr. and other capital adj	-52328	-53434	-84540
Net farm income	114415	1080	299849

Table 4. **INVENTORY CHANGES, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	154	39	39
Net cash farm income	137341	59284	299189
CROPS AND FEED			
Ending inventory	133337	83471	238286
Beginning inventory	126192	97118	204428
Inventory change	7144	-13646	33858
MARKET LIVESTOCK			
Ending inventory	8326	5522	14730
Beginning inventory	8987	6527	14026
Inventory change	-661	-1005	704
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	36606	23116	79738
Beginning inventory	27809	18927	59786
Inventory change	8797	4189	19952
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	22380	5993	54561
Beginning inventory	15205	3595	37914
Inventory change	7175	2398	16647
ACCOUNTS PAYABLE			
Beginning inventory	21387	19984	36016
Ending inventory	14441	16689	21977
Inventory change	6946	3295	14040
Total inventory change	29401	-4770	85200
Net operating profit	166743	54514	384389

Table 5. **DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	154	39	39
Net operating profit	166743	54514	384389
BREEDING LIVESTOCK			
Ending inventory	347290	240544	632472
Capital sales	4702	5581	8905
Beginning inventory	312408	235018	557206
Capital purchases	30880	21905	57573
Depreciation, capital adj.	8703	-10797	26598
MACHINERY AND EQUIPMENT			
Ending inventory	172245	81727	364656
Capital sales	10979	26677	7670
Beginning inventory	158352	87919	329842
Capital purchases	62587	47026	106283
Depreciation, capital adj.	-37714	-26542	-63799
BUILDINGS AND IMPROVEMENTS			
Ending inventory	124792	99177	192089
Capital sales	116	256	174
Beginning inventory	120995	106263	190884
Capital purchases	22418	8614	31094
Depreciation, capital adj.	-18506	-15444	-29715
OTHER CAPITAL ASSETS			
Ending inventory	32333	17898	70252
Capital sales	5929	3404	10751
Beginning inventory	20631	14737	30879
Capital purchases	22442	7215	67748
Depreciation, capital adj.	-4811	-650	-17624
Total depreciation, capital adj.	-52328	-53434	-84540
Net farm income	114415	1080	299849



Table 6. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms )))))))))	Avg. Of Low 25% )))))))))	Avg. Of High 25% )))))))))	Avg. Of All Farms )))))))))	Avg. Of Low 25% )))))))))	Avg. Of High 25% )))))))))
Number of Farms	154	39	39	154	39	39
PROFITABILITY	----- Cost -----			----- Market -----		
Net farm income	114415	1080	299849	157400	41700	348665
Labor and management earnings	83930	-13184	238521	103939	5122	259553
Rate of return on assets	8.9 %	-1.1 %	14.9 %	9.4 %	3.0 %	13.9 %
Rate of return on equity	10.9 %	-19.1 %	21.6 %	10.9 %	-0.5 %	18.0 %
Operating profit margin	16.2 %	-2.4 %	25.1 %	23.7 %	9.9 %	29.6 %
Asset turnover rate	55.0 %	46.8 %	59.2 %	39.7 %	30.4 %	47.1 %
Interest on farm net worth	30485	14265	61328	53460	36578	89113
Farm interest expense	37868	35720	57491	37868	35720	57491
Value of operator lbr and mgmt.	60363	44820	81345	60363	44820	81345
Return on farm assets	91920	-8019	275994	134905	32600	324811
Average farm assets	1034573	704925	1854158	1431567	1085536	2329953
Return on farm equity	54052	-43739	218503	97037	-3120	267320
Average farm equity	498145	229015	1009505	890822	609625	1485214
Value of farm production	568897	330161	1098441	568897	330161	1098441
	Average Of All Farms )))))))))			Average Of Low 25% )))))))))		
Number of Farms	154			39		
LIQUIDITY (Cash)	Average Of All Farms )))))))))			Average Of High 25% )))))))))		
Net cash farm income	137341			299189		
Net nonfarm income	9005			12856		
Family living and taxes	55096			94644		
Real estate principal payments	19982			41479		
Cash available for interm. debt	71268			175923		
Average intermediate debt	190294			279586		
Years to turnover interm. debt	2.7			1.6		
Expense as a % of income	81 %			77 %		
Interest as a % of income	5 %			4 %		
LIQUIDITY (Accrual)	Average Of All Farms )))))))))			Average Of Low 25% )))))))))		
Total accrual farm income	722947			1379006		
Total accrual farm expense	556204			994617		
Net accrual operating income	166743			384389		
Net nonfarm income	9005			12856		
Family living and taxes	55096			94644		
Real estate principal payments	19982			41479		
Available for intermediate debt	100670			261123		
Average intermediate debt	190294			279586		
Years to turnover interm. debt	1.9			1.1		
Expense as a % of income	77 %			72 %		
Interest as a % of income	5 %			4 %		

Table 7. **BALANCE SHEET AT COST VALUES, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ))))))))) 154		Average Of Low 25 % ))))))))) 39		Average Of High 25 % ))))))))) 39	
	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	8937	18170	3155	4875	19899	44666
Prepaid expenses & supplies	15205	22380	3595	5993	37914	54561
Growing crops	7276	8441	6619	6483	10871	11545
Accounts receivable	17490	23644	10366	14025	39843	53689
Hedging accounts	234	296	-	-	923	1169
Crops held for sale or feed	125243	132368	97118	82594	204428	238286
Crops under government loan	949	968	-	877	0	0
Market livestock held for sale	8987	8326	6527	5522	14026	14730
Other current assets	2809	4224	1942	2609	8148	13335
Total current farm assets	187130	218818	129321	122977	336054	431981
Intermediate Farm Assets						
Breeding livestock	312408	347290	235018	240544	557206	632472
Machinery and equipment	158352	172245	87919	81727	329842	364656
Other intermediate assets	14349	26808	8645	12776	22012	62023
Total intermediate farm assets	485108	546343	331582	335047	909060	1059150
Long-Term Farm Assets						
Farm land	184431	189723	136794	137475	282304	289698
Buildings and improvements	120995	124792	106263	99177	190884	192089
Other long-term assets	6282	5525	6092	5121	8867	8230
Total long-term farm assets	311708	320039	249150	241774	482054	490017
Total Farm Assets	983946	1085200	710053	699797	1727168	1981148
Total Nonfarm Assets	44087	47073	22582	22450	87159	93526
Total Assets	1028033	1132273	732635	722247	1814327	2074674
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	1095	1252	682	544	1206	877
Accounts payable	20292	13190	19302	16146	34811	21100
Current notes	47745	47480	69568	60403	56546	53241
Government crop loans	691	913	-	863	-0	-0
Principal due on term debt	46440	46233	38908	44572	70881	64459
Total current farm liabilities	116267	109074	128461	122528	163443	139687
Intermediate Farm Liabilities	150078	172172	120572	134438	226467	259547
Long-term Farm Liabilities	253917	271348	225204	220619	425050	475111
Total Farm Liabilities	520262	552594	474237	477584	814961	874345
Total Nonfarm Liabilities	9182	4892	1021	743	22122	5924
Total Liabilities	529444	557486	475258	478327	837082	880269
Net Worth (farm and nonfarm)	498589	574787	257377	243920	977244	1194405
Net Worth Change		76198		-13457		217161
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	62 %	50 %	99 %	100 %	49 %	32 %
Curr. & Interm Farm Liab / Assets	40 %	37 %	54 %	56 %	31 %	27 %
Long Term Farm Liab. / Assets	81 %	85 %	90 %	91 %	88 %	97 %
Total Liabilities / Assets	52 %	49 %	65 %	66 %	46 %	42 %

Table 8. **BALANCE SHEET AT MARKET VALUES, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ) ) ) ) ) ) ) ) 154		Average Of Low 25 % ) ) ) ) ) ) ) ) 39		Average Of High 25 % ) ) ) ) ) ) ) ) 39	
	Beginning ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) )
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	8937	18170	3155	4875	19899	44666
Prepaid expenses & supplies	15205	22380	3595	5993	37914	54561
Growing crops	7276	8441	6619	6483	10871	11545
Accounts receivable	17490	23644	10366	14025	39843	53689
Hedging accounts	234	296	-	-	923	1169
Crops held for sale or feed	125243	132368	97118	82594	204428	238286
Crops under government loan	949	968	-	877	0	0
Market livestock held for sale	8987	8326	6527	5522	14026	14730
Other current assets	2809	4224	1942	2609	8148	13335
Total current farm assets	187130	218818	129321	122977	336054	431981
Intermediate Farm Assets						
Breeding livestock	316147	351633	235018	241524	557206	632654
Machinery and equipment	258537	285169	200911	205618	390571	450150
Other intermediate assets	23828	37465	8556	13162	55263	95878
Total intermediate farm assets	598512	674268	444485	460304	1003040	1178681
Long-Term Farm Assets						
Farm land	420975	447442	370882	388297	582363	600845
Buildings and improvements	142781	154212	114564	118522	248317	261528
Other long-term assets	9700	9297	11102	10617	8867	8230
Total long-term farm assets	573456	610951	496548	517436	839547	870603
Total Farm Assets	1359097	1504037	1070354	1100718	2178640	2481265
Total Nonfarm Assets	73668	80105	35437	35277	105644	118469
Total Assets	1432766	1584142	1105791	1135995	2284284	2599734
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	1095	1252	682	544	1206	877
Accounts payable	20292	13190	19302	16146	34811	21100
Current notes	47745	47480	69568	60403	56546	53241
Government crop loans	691	913	-	863	-0	-0
Principal due on term debt	46440	46233	38908	44572	70881	64459
Total current farm liabilities	116267	109074	128461	122528	163443	139687
Intermediate Farm Liabilities	150078	172172	120572	134438	226467	259547
Long-term Farm Liabilities	253917	271348	225204	220619	425050	475111
Total Farm Liabilities	520262	552594	474237	477584	814961	874345
Total Nonfarm Liabilities	9182	4892	1021	743	22122	5924
Total Deferred Liabilities	3936	4787	-	-	172	-
Total Liabilities	533380	562273	475258	478327	837254	880269
Net Worth (farm and nonfarm)	899386	1021869	630533	657668	1447030	1719465
Net Worth Change		122483		27135		272435
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	62 %	50 %	99 %	100 %	49 %	32 %
Curr. & Interm Farm Liab. / Assets	34 %	31 %	43 %	44 %	29 %	25 %
Long Term Farm Liabilities / Assets	44 %	44 %	45 %	43 %	51 %	55 %
Total Liabilities / Assets	37 %	35 %	43 %	42 %	37 %	34 %

Table 9. **STATEMENT OF CASH FLOWS, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

		Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms		154	39	39
(a) Beginning cash balance (farm & nonfarm)		9312	3935	19920
CASH FROM OPERATING ACTIVITIES				
Gross cash farm income		707667	465006	1324492
Net nonfarm income	(+)	9005	10551	12856
Total cash farm expense	(-)	570326	405722	1025304
Apparent family living expense	(-)	52017	27945	88126
Income and social security tax	(-)	3079	1212	6517
(b) Cash from operations	(=)	91250	40679	217401
CASH FROM INVESTING ACTIVITIES				
Sale of breeding livestock		4702	5581	8905
Sale of machinery & equipment	(+)	10979	26677	7670
Sale of farm land	(+)	2861	-	9445
Sale of farm buildings	(+)	116	256	174
Sale of other farm assets	(+)	5929	3404	10751
Sale of nonfarm assets	(+)	250	256	643
Purchase of breeding livestock	(-)	30880	21905	57573
Purchase of machinery & equip.	(-)	62587	47026	106283
Purchase of farm land	(-)	8333	513	20311
Purchase of farm buildings	(-)	22418	8614	31094
Purchase of other farm assets	(-)	22442	7215	67748
Purchase of nonfarm assets	(-)	954	134	2585
(c) Cash from investing activities	(=)	-122778	-49232	-248006
CASH FROM FINANCING ACTIVITIES				
Money borrowed		181564	106586	243694
Cash gifts and inheritances	(+)	9918	6092	7159
Principal payments	(-)	146482	100177	186107
Dividends paid	(-)	-	-	-
Gifts given	(-)	4395	2993	9374
(d) Cash from financing activities	(=)	40606	9508	55372
(e) Net change in cash balance (b+c+d)		9078	954	24767
Ending cash balance (farm & nonfarm)		18390	4889	44686

Table 10. **FINANCIAL GUIDELINES MEASURES, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

	Average Of All Farms ) ) ) ) ) ) ) ) ) ) 154		Average Of Low 25 % ) ) ) ) ) ) ) ) ) ) 39		Average Of High 25 % ) ) ) ) ) ) ) ) ) ) 39	
Number of Farms						
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	1.61	2.01	1.01	1.00	2.06	3.09
Working capital	70863	109744	861	449	172610	292294
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	39 %	37 %	44 %	43 %	37 %	35 %
Farm equity to asset ratio	61 %	63 %	56 %	57 %	63 %	65 %
Farm debt to equity ratio	63 %	59 %	80 %	77 %	60 %	54 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	8.9 %	9.4 %	-1.1 %	3.0 %	14.9 %	13.9 %
Rate of return on farm equity	10.9 %	10.9 %	-19.1 %	-0.5 %	21.6 %	18.0 %
Operating profit margin	16.2 %	23.7 %	-2.4 %	9.9 %	25.1 %	29.6 %
Net farm income	114415	157400	1080	41700	299849	348665
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	166 %	211 %	102 %	93 %	235 %	316 %
Capital replacement margin	43505	72906	1261	-3509	142762	227962
EFFICIENCY						
Asset turnover rate (market)	39.7 %		30.4 %		47.1 %	
Operating expense ratio	71.7 %		80.1 %		68.0 %	
Depreciation expense ratio	7.2 %		11.8 %		6.1 %	
Interest expense ratio	5.2 %		7.9 %		4.2 %	
Net farm income ratio	15.8 %		0.2 %		21.7 %	

LABOR ANALYSIS

	Average Of All Farms ) ) ) ) ) ) ) ) ) ) 154		Average Of Low 25 % ) ) ) ) ) ) ) ) ) ) 39		Average Of High 25 % ) ) ) ) ) ) ) ) ) ) 39	
Number of Farms						
Total unpaid labor hours	5395		4241		5941	
Total hired labor hours	8047		5932		15603	
Total labor hours per farm	13442		10173		21544	
Value of farm production / hour	42.32		32.45		50.99	
Net farm income / unpaid hour	21.21		0.25		50.47	

Table 11. **OPERATOR INFORMATION & NONFARM SUMMARY, 1998**  
**Michigan Dairy Farms, All Sizes**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	154	39	39
OPERATOR INFORMATION			
Average number of operators	1.6	1.4	1.9
Average age of operators	48.3	49.6	45.2
Average number of years farming	23.6	27.1	19.8
NONFARM INCOME			
Nonfarm wages & salary	3579	6762	4069
Nonfarm business income	797	-34	899
Nonfarm rental income	923	564	702
Nonfarm interest income	1178	449	3159
Nonfarm cash dividends	73	89	163
Tax refunds	317	428	216
Nontaxable nonfarm income	-	-	-
Gifts and inheritances	9918	6092	7159
Other nonfarm income	2139	2294	3648
Total nonfarm income	18923	16644	20015
NONFARM ASSETS (Mkt)			
	Average Of All Farms Beginning      Ending )))))))))    ))))))))		
Checking & savings	375	220	
Stocks & bonds	3111	3775	
Other current assets	2144	1944	
Furniture & appliances	3549	3516	
Nonfarm vehicles	7359	6779	
Cash value of life ins.	5253	5986	
Retirement accounts	12547	14424	
Other intermediate assets	3521	4309	
Nonfarm real estate	23856	25977	
Other long term assets	11952	13175	
Total nonfarm assets	73668	80105	

Table 12. **Livestock and Crops Production Summary, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25 % )))))))))	Average Of High 25 % )))))))))
Dairy			
Number of farms	38	10	10
Avg. number of Cows	55.8	51.5	61.8
Milk produced per Cow	16,827	16,227	16,761
Percent of barn capacity	93.6	102.2	80.9
Avg. milk price per cwt.	15.20	15.16	15.12
ACREAGE SUMMARY			
Total Crop Acres	346	466	301
Crop Acres Owned	193	221	200
Crop Acres Cash Rented	147	226	98
Crop Acres Share Rented	6	18	4
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	2.04	-	-
Soybeans per bu.	5.67	-	-
Wheat, Winter per bu.	2.58	-	-
AVERAGE YIELD PER ACRE			
Corn (bu.)	83.53	-	-
Hay, Alfalfa (ton)	3.50	3.46	4.06
Corn Silage (ton)	9.96	12.43	11.32
Hay, Native Grass (ton)	2.23	-	-
Soybeans (bu.)	37.02	-	-
Wheat, Winter (bu.)	47.15	-	-
Oats (bu.)	53.94	-	-

Table 13. **FARM INCOME STATEMENT, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	38	10	10
CASH FARM INCOME			
Corn	4067	8092	1700
Seed Corn	12	-	15
Alfalfa Hay	9	-	34
Mixed Hay	604	367	1740
Mixed Haylage	197	-	747
Oats	485	1782	-
Potatoes	22	84	-
Soybeans	5761	14015	2760
Straw	10	20	16
Sugar Beets	427	-	1624
Winter Wheat	1388	2188	770
Beef Calves	19	-	70
Milk	142693	126713	156615
Dairy Calves	877	1390	436
Dairy Heifers (for sale)	93	210	144
Dairy Replacement Heifers	360	59	1239
Dairy Steers	3963	3502	9404
Foals	76	-	288
Cull breeding livestock	6505	4724	6262
Misc. livestock income	108	-	115
Transition payments	997	-	-
Other government payments	5210	8208	7263
Custom work income	1143	968	1391
Patronage dividends, cash	980	1314	790
Insurance income	558	634	823
Other farm income	2274	2535	3518
Gross Cash Farm Income	178834	176806	197764



Table 14. **FARM INCOME STATEMENT, 1998 (Continued)**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	38	10	10
<b>CASH FARM EXPENSE</b>			
Seed	5203	5462	5426
Fertilizer	10339	13195	9959
Crop chemicals	4336	3803	5806
Crop insurance	229	516	169
Drying fuel	54	97	-
Crop marketing	630	1747	646
Crop miscellaneous	449	266	197
Feeder livestock purchase	13	-	51
Purchased feed	31511	30802	34330
Breeding fees	1034	706	1045
Veterinary	3029	2927	3378
Livestock supplies	4966	3107	6792
Livestock leases	333	-	950
Livestock marketing	5140	5583	4684
Interest	11844	14148	9879
Fuel & oil	3964	4575	4252
Repairs	12184	10422	13555
Custom hire	3223	5707	1785
Hired labor	10212	11320	10826
Land rent	5107	7080	5509
Machinery & bldg leases	2650	3173	3696
Real estate taxes	2868	3116	3115
Personal property taxes	173	-	531
Farm insurance	3395	4081	4020
Utilities	5105	5005	4967
Dues & professional fees	1029	634	1120
Hedging account deposits	59	-	-
Miscellaneous	6002	6477	8136
Total cash expense	135080	143951	144824
Net cash farm income	43755	32855	52939
<b>INVENTORY CHANGES</b>			
Crops and feed	-3514	-15086	3376
Market livestock	178	-277	1263
Accounts receivable	1771	1392	5500
Prepaid expenses and supplies	941	1352	1305
Accounts payable	3142	161	10210
Total inventory change	2518	-12457	21654
Net operating profit	46273	20398	74593
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	4027	-1484	7940
Machinery and equipment	-15655	-19532	-12445
Buildings and improvements	-3573	-3494	-3556
Other farm capital	-474	-402	-179
Total depr. and other capital adj	-15674	-24912	-8241
Net farm income	30598	-4514	66353

Table 15. **INVENTORY CHANGES, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	38	10	10
Net cash farm income	43755	32855	52939
CROPS AND FEED			
Ending inventory	44531	56537	48295
Beginning inventory	48045	71623	44919
Inventory change	-3514	-15086	3376
MARKET LIVESTOCK			
Ending inventory	2733	3863	4711
Beginning inventory	2555	4139	3447
Inventory change	178	-277	1263
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	9546	12063	13100
Beginning inventory	7774	10671	7600
Inventory change	1771	1392	5500
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	3498	4337	2870
Beginning inventory	2557	2985	1565
Inventory change	941	1352	1305
ACCOUNTS PAYABLE			
Beginning inventory	6069	1326	16742
Ending inventory	2927	1165	6531
Inventory change	3142	161	10210
Total inventory change	2518	-12457	21654
Net operating profit	46273	20398	74593

Table 16. **DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	38	10	10
Net operating profit	46273	20398	74593
BREEDING LIVESTOCK			
Ending inventory	96467	94351	99027
Capital sales	461	-	155
Beginning inventory	90620	93534	87517
Capital purchases	2281	2300	3726
Depreciation, capital adj.	4027	-1484	7940
MACHINERY AND EQUIPMENT			
Ending inventory	41099	44276	46730
Capital sales	5091	12440	4152
Beginning inventory	39462	47643	36601
Capital purchases	22384	28605	26725
Depreciation, capital adj.	-15655	-19532	-12445
BUILDINGS AND IMPROVEMENTS			
Ending inventory	22486	19788	27788
Capital sales	-	-	-
Beginning inventory	22446	21468	23343
Capital purchases	3613	1814	8001
Depreciation, capital adj.	-3573	-3494	-3556
OTHER CAPITAL ASSETS			
Ending inventory	4021	3426	3209
Capital sales	1455	2582	2418
Beginning inventory	4240	4264	3365
Capital purchases	1710	2147	2442
Depreciation, capital adj.	-474	-402	-179
Total depreciation, capital adj.	-15674	-24912	-8241
Net farm income	30598	-4514	66353

Table 17. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms ))))))	Avg. Of Low 25% ))))))	Avg. Of High 25% ))))))	Avg. Of All Farms ))))))	Avg. Of Low 25% ))))))	Avg. Of High 25% ))))))
Number of Farms	38	10	10	38	10	10
<b>PROFITABILITY</b>						
	----- Cost -----			----- Market -----		
Net farm income	30598	-4514	66353	50958	22572	83765
Labor and management earnings	21864	-14386	57470	27928	-4580	63317
Rate of return on assets	2.0 %	-8.0 %	10.4 %	4.7 %	-0.1 %	9.0 %
Rate of return on equity	-4.2 %	-25.3 %	23.7 %	3.9 %	-3.2 %	12.3 %
Operating profit margin	4.3 %	-21.1 %	19.2 %	17.8 %	-0.4 %	28.8 %
Asset turnover rate	47.1 %	38.0 %	54.1 %	26.1 %	20.7 %	31.1 %
Interest on farm net worth	8734	9872	8883	23030	27152	20449
Farm interest expense	11886	14150	10396	11886	14150	10396
Value of operator lbr and mgmt.	36119	37185	41823	36119	37185	41823
Return on farm assets	6365	-27550	34926	26725	-463	52339
Average farm assets	317886	343420	335278	573714	631422	583735
Return on farm equity	-5521	-41699	24530	14839	-14613	41943
Average farm equity	130230	164536	103618	383094	452538	340812
Value of farm production	149772	130549	181462	149772	130549	181462
		Average Of All Farms ))))))	Average Of Low 25% ))))))	Average Of High 25% ))))))		
Number of Farms		38	10	10		
<b>LIQUIDITY (Cash)</b>						
Net cash farm income		43755	32855	52939		
Net nonfarm income		5321	6248	4090		
Family living and taxes		26106	25541	33699		
Real estate principal payments		5892	5920	7304		
Cash available for interm. debt		17077	7642	16027		
Average intermediate debt		56258	55638	73496		
Years to turnover interm. debt		3.3	7.3	4.6		
Expense as a % of income		76 %	81 %	73 %		
Interest as a % of income		7 %	8 %	5 %		
<b>LIQUIDITY (Accrual)</b>						
Total accrual farm income		177269	162835	207902		
Total accrual farm expense		130997	142437	133309		
Net accrual operating income		46273	20398	74593		
Net nonfarm income		5321	6248	4090		
Family living and taxes		26106	25541	33699		
Real estate principal payments		5892	5920	7304		
Available for intermediate debt		19595	-4816	37681		
Average intermediate debt		56258	55638	73496		
Years to turnover interm. debt		2.9	**	2.0		
Expense as a % of income		74 %	87 %	64 %		
Interest as a % of income		7 %	9 %	5 %		

\*\* Income insufficient to meet debt servicing requirements

Table 18. **BALANCE SHEET AT COST VALUES, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ))))))))) 38		Average Of Low 25 % ))))))))) 10		Average Of High 25 % ))))))))) 10	
	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	3399	3118	6122	3851	848	1280
Prepaid expenses & supplies	2557	3498	2985	4337	1565	2870
Growing crops	3493	4680	3198	3279	4266	8789
Accounts receivable	2142	2694	1296	1709	2592	3737
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	48045	43442	71623	56537	44919	47577
Crops under government loan	-	1089	-	-	-	717
Market livestock held for sale	2555	2733	4139	3863	3447	4711
Other current assets	2139	2171	6177	7074	741	573
Total current farm assets	64330	63425	95541	80651	58380	70255
Intermediate Farm Assets						
Breeding livestock	90620	96467	93534	94351	87517	99027
Machinery and equipment	39462	41099	47643	44276	36601	46730
Other intermediate assets	1632	1504	2664	1868	1672	1412
Total intermediate farm assets	131713	139070	143841	140494	125789	147168
Long-Term Farm Assets						
Farm land	93277	93900	90948	90948	106070	108271
Buildings and improvements	22446	22486	21468	19788	23343	27788
Other long-term assets	2608	2517	1600	1558	1693	1798
Total long-term farm assets	118331	118903	114017	112295	131106	137857
Total Farm Assets	314374	321399	353399	333440	315275	355280
Total Nonfarm Assets	23856	25017	41298	43398	18945	21650
Total Assets	338230	346415	394698	376839	334220	376930
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	435	477	205	206	297	815
Accounts payable	5634	2451	1121	958	16444	5717
Current notes	18283	15635	33202	33836	12140	11498
Government crop loans	-	1073	-	-	-	710
Principal due on term debt	12910	14492	11718	12435	13173	16564
Total current farm liabilities	37262	34127	46245	47436	42054	35303
Intermediate Farm Liabilities	45280	50587	47105	52020	56398	70639
Long-term Farm Liabilities	106936	101120	84088	80874	131991	126935
Total Farm Liabilities	189478	185834	177438	180329	230443	232877
Total Nonfarm Liabilities	2555	1792	610	400	5532	4300
Total Liabilities	192033	187626	178048	180729	235976	237177
Net Worth (farm and nonfarm)	146197	158789	216649	196109	98245	139754
Net Worth Change		12593		-20540		41509
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	58 %	54 %	48 %	59 %	72 %	50 %
Curr. & Interm Farm Liab / Assets	42 %	42 %	39 %	45 %	53 %	49 %
Long Term Farm Liab. / Assets	90 %	85 %	74 %	72 %	101 %	92 %
Total Liabilities / Assets	57 %	54 %	45 %	48 %	71 %	63 %

Table 19. **BALANCE SHEET AT MARKET VALUES, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ))))))))) 38		Average Of Low 25 % ))))))))) 10		Average Of High 25 % ))))))))) 10	
	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	3399	3118	6122	3851	848	1280
Prepaid expenses & supplies	2557	3498	2985	4337	1565	2870
Growing crops	3493	4680	3198	3279	4266	8789
Accounts receivable	2142	2694	1296	1709	2592	3737
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	48045	43442	71623	56537	44919	47577
Crops under government loan	-	1089	-	-	-	717
Market livestock held for sale	2555	2733	4139	3863	3447	4711
Other current assets	2139	2171	6177	7074	741	573
Total current farm assets	64330	63425	95541	80651	58380	70255
Intermediate Farm Assets						
Breeding livestock	91610	99518	93534	98243	91280	106728
Machinery and equipment	108346	111764	141582	151359	96840	98315
Other intermediate assets	1876	1748	2664	1868	2598	2338
Total intermediate farm assets	201832	213030	237781	251469	190718	207381
Long-Term Farm Assets						
Farm land	246435	262817	259533	268453	262220	290525
Buildings and improvements	33974	35652	23403	22853	30450	38050
Other long-term assets	12512	13420	11600	11558	9693	9798
Total long-term farm assets	292921	311889	294536	302865	302363	338373
Total Farm Assets	559084	588344	627858	634985	551461	616009
Total Nonfarm Assets	42734	44474	50175	51464	58855	60929
Total Assets	601818	632818	678033	686449	610315	676938
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	435	477	205	206	297	815
Accounts payable	5634	2451	1121	958	16444	5717
Current notes	18283	15635	33202	33836	12140	11498
Government crop loans	-	1073	-	-	-	710
Principal due on term debt	12910	14492	11718	12435	13173	16564
Total current farm liabilities	37262	34127	46245	47436	42054	35303
Intermediate Farm Liabilities	45280	50587	47105	52020	56398	70639
Long-term Farm Liabilities	106936	101120	84088	80874	131991	126935
Total Farm Liabilities	189478	185834	177438	180329	230443	232877
Total Nonfarm Liabilities	2555	1792	610	400	5532	4300
Total Deferred Liabilities	2026	4513	-	-	7697	17150
Total Liabilities	194059	192139	178048	180729	243673	254327
Net Worth (farm and nonfarm)	407759	440679	499985	505720	366643	422611
Net Worth Change		32920		5735		55968
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	58 %	54 %	48 %	59 %	72 %	50 %
Curr. & Inter Farm Liab. / Assets	31 %	31 %	28 %	30 %	40 %	38 %
Long Term Farm Liabilities / Assets	37 %	32 %	29 %	27 %	44 %	38 %
Total Liabilities / Assets	32 %	30 %	26 %	26 %	40 %	38 %

Table 20. **STATEMENT OF CASH FLOWS, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

		Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms		38	10	10
(a) Beginning cash balance (farm & nonfarm)		3774	7287	908
CASH FROM OPERATING ACTIVITIES				
Gross cash farm income		178834	176806	197764
Net nonfarm income	(+)	5321	6248	4090
Total cash farm expense	(-)	135080	143951	144824
Apparent family living expense	(-)	24889	22794	32675
Income and social security tax	(-)	1217	2747	1024
(b) Cash from operations	(=)	22969	13562	23331
CASH FROM INVESTING ACTIVITIES				
Sale of breeding livestock		461	-	155
Sale of machinery & equipment	(+)	5091	12440	4152
Sale of farm land	(+)	-	-	-
Sale of farm buildings	(+)	-	-	-
Sale of other farm assets	(+)	1455	2582	2418
Sale of nonfarm assets	(+)	263	-	-
Purchase of breeding livestock	(-)	2281	2300	3726
Purchase of machinery & equip.	(-)	22384	28605	26725
Purchase of farm land	(-)	-	-	-
Purchase of farm buildings	(-)	3613	1814	8001
Purchase of other farm assets	(-)	1710	2147	2442
Purchase of nonfarm assets	(-)	13	-	50
(c) Cash from investing activities	(=)	-22730	-19843	-34219
CASH FROM FINANCING ACTIVITIES				
Money borrowed		29419	24870	53820
Cash gifts and inheritances	(+)	1573	1668	2610
Principal payments	(-)	30677	22059	42407
Dividends paid	(-)	-	-	-
Gifts given	(-)	1102	1580	2606
(d) Cash from financing activities	(=)	-786	2899	11417
(e) Net change in cash balance (b+c+d)		-548	-3382	529
Ending cash balance (farm & nonfarm)		3227	3905	1438

Table 21. **FINANCIAL GUIDELINES MEASURES, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms ))))))))) 38		Average Of Low 25 % ))))))))) 10		Average Of High 25 % ))))))))) 10	
Number of Farms						
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	1.73	1.86	2.07	1.70	1.39	1.99
Working capital	27068	29298	49296	33216	16326	34953
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	34 %	32 %	28 %	28 %	43 %	39 %
Farm equity to asset ratio	66 %	68 %	72 %	72 %	57 %	61 %
Farm debt to equity ratio	52 %	47 %	39 %	40 %	76 %	64 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	2.0 %	4.7 %	-8.0 %	-0.1 %	10.4 %	9.0 %
Rate of return on farm equity	-4.2 %	3.9 %	-25.3 %	-3.2 %	23.7 %	12.3 %
Operating profit margin	4.3 %	17.8 %	-21.1 %	-0.4 %	19.2 %	28.8 %
Net farm income	30598	50958	-4514	22572	66353	83765
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	140 %	151 %	108 %	51 %	134 %	220 %
Capital replacement margin	9405	11923	1662	-10795	8444	30098
EFFICIENCY						
Asset turnover rate (market)	26.1 %		20.7 %		31.1 %	
Operating expense ratio	67.2 %		78.8 %		59.1 %	
Depreciation expense ratio	8.8 %		15.3 %		4.0 %	
Interest expense ratio	6.7 %		8.7 %		5.0 %	
Net farm income ratio	17.3 %		-2.8 %		31.9 %	

LABOR ANALYSIS

	Average Of All Farms ))))))))) 38		Average Of Low 25 % ))))))))) 10		Average Of High 25 % ))))))))) 10	
Number of Farms						
Total unpaid labor hours	4627		4655		6536	
Total hired labor hours	1310		1405		1360	
Total labor hours per farm	5937		6060		7896	
Value of farm production / hour	25.23		21.54		22.98	
Net farm income / unpaid hour	6.61		-0.97		10.15	



Table 22. **OPERATOR INFORMATION & NONFARM SUMMARY, 1998**  
**Michigan Dairy Farms, 20 - 75.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	38	10	10
OPERATOR INFORMATION			
Average number of operators	1.2	1.1	1.1
Average age of operators	46.0	45.3	
Average number of years farming	21.0	22.7	
NONFARM INCOME			
Nonfarm wages & salary	3236	5182	3130
Nonfarm business income	6	-	100
Nonfarm rental income	294	396	183
Nonfarm interest income	48	152	25
Nonfarm cash dividends	3	12	-
Tax refunds	214	278	163
Nontaxable nonfarm income	-	-	-
Gifts and inheritances	1573	1668	2610
Other nonfarm income	1520	228	490
Total nonfarm income	6894	7916	6700
NONFARM ASSETS (Mkt)			
	Average Of All Farms Beginning      Ending )))))))))    ))))))))		
Checking & savings	375	108	
Stocks & bonds	616	1067	
Other current assets	1122	78	
Furniture & appliances	7078	6947	
Nonfarm vehicles	2421	3121	
Cash value of life ins.	4491	4593	
Retirement accounts	5358	6371	
Other intermediate assets	868	868	
Nonfarm real estate	16212	17028	
Other long term assets	4192	4292	
Total nonfarm assets	42734	44474	

Table 23. **Livestock and Crop Production Summary, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25 % )))))))))	Average Of High 25 % )))))))))
Dairy			
Number of farms	32	8	8
Avg. number of Cows	100.2	96.8	103.2
Milk produced per Cow	19,555	17,942	20,801
Percent of barn capacity	96.9	96.1	99.3
Avg. milk price per cwt.	15.14	14.83	14.93
ACREAGE SUMMARY			
Total Crop Acres	371	501	343
Crop Acres Owned	227	291	268
Crop Acres Cash Rented	144	210	75
Crop Acres Share Rented	-	-	-
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	2.06	-	-
AVERAGE YIELD PER ACRE			
Corn (bu.)	117.50	-	-
Hay, Alfalfa (ton)	3.75	-	-
Corn Silage (ton)	14.30	-	-
Haylage, Alfalfa (ton)	5.90	-	-
Soybeans (bu.)	49.04	-	-
Hay, Native Grass (ton)	3.13	-	-
Wheat, Winter (bu.)	51.48	-	-

Table 24. **FARM INCOME STATEMENT, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	32	8	8
CASH FARM INCOME			
Corn	9275	10515	12569
Alfalfa Hay	121	-	484
Mixed Hay	113	32	200
Oats	44	-	176
Soybeans	6819	6710	10914
Straw	18	38	35
Winter Wheat	1529	2357	1900
Background Beef	449	-	-
Milk	296567	257659	320528
Dairy Calves	1549	1076	716
Dairy Replacement Heifers	134	-	62
Dairy Steers	6316	7751	2307
Cull breeding livestock	11076	9252	12545
Misc. livestock income	1	-	-
Transition payments	646	-	2258
Other government payments	11539	13704	12584
Custom work income	326	48	1079
Patronage dividends, cash	1180	896	707
Insurance income	1452	1593	3715
Other farm income	4472	5885	7737
Gross Cash Farm Income	353625	317514	390517

Table 25. **FARM INCOME STATEMENT, 1998 (Continued)**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	32	8	8
<b>CASH FARM EXPENSE</b>			
Seed	8964	10158	8123
Fertilizer	15967	14111	19888
Crop chemicals	8751	6086	10033
Crop insurance	11	-	7
Drying fuel	399	34	1104
Crop marketing	35	-	-
Crop miscellaneous	396	466	367
Purchased feed	72656	51199	71925
Breeding fees	2212	2067	1557
Veterinary	7991	7391	6229
Livestock supplies	12274	13213	10997
Livestock leases	129	53	-
Livestock marketing	9357	5885	7605
Interest	18498	21787	12817
Fuel & oil	6909	7674	6407
Repairs	21862	23785	25313
Custom hire	6686	6221	5707
Hired labor	29069	39237	15909
Land rent	13127	15214	12379
Machinery & bldg leases	1112	1070	538
Real estate taxes	5876	6942	5912
Personal property taxes	458	14	1762
Farm insurance	5029	7379	5233
Utilities	7456	8721	7196
Dues & professional fees	3627	2900	5478
Miscellaneous	12141	9387	21385
Total cash expense	270992	260995	263871
Net cash farm income	82633	56519	126646
<b>INVENTORY CHANGES</b>			
Crops and feed	2479	-13746	16323
Market livestock	-2256	-1806	2723
Accounts receivable	4962	4803	6819
Prepaid expenses and supplies	2814	2990	3973
Accounts payable	3797	565	1736
Total inventory change	11796	-7194	31573
Net operating profit	94429	49324	158219
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	10950	3909	27194
Machinery and equipment	-22803	-26851	-22070
Buildings and improvements	-5066	-11503	4948
Other farm capital	-1683	-1622	-6393
Total depr. and other capital adj	-18603	-36067	3679
Net farm income	75826	13258	161898

Table 26. **INVENTORY CHANGES, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	32	8	8
Net cash farm income	82633	56519	126646
CROPS AND FEED			
Ending inventory	70803	64504	70971
Beginning inventory	68324	78250	54648
Inventory change	2479	-13746	16323
MARKET LIVESTOCK			
Ending inventory	7014	15038	5385
Beginning inventory	9270	16843	2662
Inventory change	-2256	-1806	2723
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	15813	15416	18872
Beginning inventory	10851	10613	12053
Inventory change	4962	4803	6819
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	9913	5291	16075
Beginning inventory	7099	2301	12102
Inventory change	2814	2990	3973
ACCOUNTS PAYABLE			
Beginning inventory	8806	4497	6317
Ending inventory	5009	3932	4581
Inventory change	3797	565	1736
Total inventory change	11796	-7194	31573
Net operating profit	94429	49324	158219

Table 27. **DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	32	8	8
Net operating profit	94429	49324	158219
BREEDING LIVESTOCK			
Ending inventory	178610	192137	191748
Capital sales	1874	857	4955
Beginning inventory	164110	186908	153097
Capital purchases	5425	2178	16413
Depreciation, capital adj.	10950	3909	27194
MACHINERY AND EQUIPMENT			
Ending inventory	75139	80212	114438
Capital sales	12489	42917	4624
Beginning inventory	70806	93295	78421
Capital purchases	39625	56684	62711
Depreciation, capital adj.	-22803	-26851	-22070
BUILDINGS AND IMPROVEMENTS			
Ending inventory	73846	73445	122191
Capital sales	212	-	849
Beginning inventory	56882	84798	38892
Capital purchases	22242	150	79201
Depreciation, capital adj.	-5066	-11503	4948
OTHER CAPITAL ASSETS			
Ending inventory	13008	7476	8091
Capital sales	2989	120	340
Beginning inventory	14125	9048	10277
Capital purchases	3556	170	4547
Depreciation, capital adj.	-1683	-1622	-6393
Total depreciation, capital adj.	-18603	-36067	3679
Net farm income	75826	13258	161898

Table 28. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms ))))))	Avg. Of Low 25% ))))))	Avg. Of High 25% ))))))	Avg. Of All Farms ))))))	Avg. Of Low 25% ))))))	Avg. Of High 25% ))))))
Number of Farms	32	8	8	32	8	8
<b>PROFITABILITY</b>	----- Cost -----			----- Market -----		
Net farm income	75826	13258	161898	105401	45732	194675
Labor and management earnings	58575	-1572	137108	68702	9498	147561
Rate of return on assets	7.7 %	-0.6 %	16.3 %	8.1 %	3.0 %	13.7 %
Rate of return on equity	9.1 %	-10.3 %	23.9 %	9.0 %	1.2 %	16.7 %
Operating profit margin	14.9 %	-1.4 %	30.0 %	24.8 %	11.1 %	38.8 %
Asset turnover rate	51.6 %	43.7 %	54.5 %	32.7 %	27.3 %	35.2 %
Interest on farm net worth	17252	14829	24791	36700	36234	47114
Farm interest expense	18468	21640	12784	18468	21640	12784
Value of operator lbr and mgmt.	50132	38636	63350	50132	38636	63350
Return on farm assets	44162	-3739	111333	73737	28736	144110
Average farm assets	575392	593936	682092	909297	951654	1054570
Return on farm equity	25695	-25379	98549	55269	7096	131325
Average farm equity	282766	246181	413177	611663	603900	785236
Value of farm production	297103	259475	371651	297103	259475	371651
	Average Of All Farms ))))))			Average Of Low 25% ))))))		
Number of Farms	32			8		
<b>LIQUIDITY (Cash)</b>						
Net cash farm income	82633			126646		
Net nonfarm income	9558			2698		
Family living and taxes	51919			90215		
Real estate principal payments	10902			10114		
Cash available for interm. debt	29370			29014		
Average intermediate debt	95437			70825		
Years to turnover interm. debt	3.2			2.4		
Expense as a % of income	77 %			68 %		
Interest as a % of income	5 %			3 %		
<b>LIQUIDITY (Accrual)</b>						
Total accrual farm income	358809			416381		
Total accrual farm expense	264380			258162		
Net accrual operating income	94429			158219		
Net nonfarm income	9558			2698		
Family living and taxes	51919			90215		
Real estate principal payments	10902			10114		
Available for intermediate debt	41167			60587		
Average intermediate debt	95437			70825		
Years to turnover interm. debt	2.3			1.2		
Expense as a % of income	74 %			62 %		
Interest as a % of income	5 %			3 %		

Table 29. **BALANCE SHEET AT COST VALUES, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ))))))))) 32		Average Of Low 25 % ))))))))) 8		Average Of High 25 % ))))))))) 8	
	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	10986	16154	8736	8112	18730	40212
Prepaid expenses & supplies	7099	9913	2301	5291	12102	16075
Growing crops	3900	6223	6483	6208	2123	9619
Accounts receivable	6019	9226	3441	8144	7681	9063
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	68324	69518	78250	64504	54648	65831
Crops under government loan	-	1285	-	-	-	5140
Market livestock held for sale	9270	7014	16843	15038	2662	5385
Other current assets	932	365	689	1064	2250	191
Total current farm assets	106529	119697	116743	108360	100196	151515
Intermediate Farm Assets						
Breeding livestock	164110	178610	186908	192137	153097	191748
Machinery and equipment	70806	75139	93295	80212	78421	114438
Other intermediate assets	6434	6676	3331	3881	2838	3238
Total intermediate farm assets	241350	260425	283533	276230	234355	309424
Long-Term Farm Assets						
Farm land	133691	144340	117333	118118	179123	216196
Buildings and improvements	56882	73846	84798	73445	38892	122191
Other long-term assets	7691	6333	5717	3595	7440	4853
Total long-term farm assets	198264	224518	207848	195159	225455	343240
Total Farm Assets	546143	604640	608125	579748	560005	804179
Total Nonfarm Assets	30554	35655	28147	28841	76308	86853
Total Assets	576697	640296	636272	608589	636313	891033
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	608	578	657	510	507	474
Accounts payable	8198	4431	3840	3422	5809	4106
Current notes	22934	18991	38876	31767	14245	3850
Government crop loans	-	1224	-	-	-	4897
Principal due on term debt	25420	20573	20737	23619	21882	10732
Total current farm liabilities	57160	45797	64110	59318	42445	24061
Intermediate Farm Liabilities	81841	83086	98975	86464	49353	75312
Long-term Farm Liabilities	150131	167235	195960	190682	131866	214795
Total Farm Liabilities	289132	296119	359046	336464	223663	314168
Total Nonfarm Liabilities	297	1236	1188	1188	-	1383
Total Liabilities	289428	297356	360234	337651	223663	315551
Net Worth (farm and nonfarm)	287268	342940	276038	270937	412650	575482
Net Worth Change		55671		-5101		162832
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	54 %	38 %	55 %	55 %	42 %	16 %
Curr. & Interm Farm Liab / Assets	40 %	34 %	41 %	38 %	27 %	22 %
Long Term Farm Liab. / Assets	76 %	74 %	94 %	98 %	58 %	63 %
Total Liabilities / Assets	50 %	46 %	57 %	55 %	35 %	35 %



Table 30. **BALANCE SHEET AT MARKET VALUES, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ) ) ) ) ) ) ) ) 32		Average Of Low 25 % ) ) ) ) ) ) ) ) 8		Average Of High 25 % ) ) ) ) ) ) ) ) 8	
	Beginning ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) )
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	10986	16154	8736	8112	18730	40212
Prepaid expenses & supplies	7099	9913	2301	5291	12102	16075
Growing crops	3900	6223	6483	6208	2123	9619
Accounts receivable	6019	9226	3441	8144	7681	9063
Hedging accounts	-	-	-	-	-	-
Crops held for sale or feed	68324	69518	78250	64504	54648	65831
Crops under government loan	-	1285	-	-	-	5140
Market livestock held for sale	9270	7014	16843	15038	2662	5385
Other current assets	932	365	689	1064	2250	191
Total current farm assets	106529	119697	116743	108360	100196	151515
Intermediate Farm Assets						
Breeding livestock	168626	182873	186908	192137	153097	192636
Machinery and equipment	179397	194893	219037	220976	189990	235563
Other intermediate assets	10458	15004	2899	3881	19136	35738
Total intermediate farm assets	358481	392770	408844	416993	362223	463936
Long-Term Farm Assets						
Farm land	335430	358707	378806	386900	378873	431475
Buildings and improvements	53806	72409	39496	37855	68063	138865
Other long-term assets	10778	9986	5717	3595	7159	6836
Total long-term farm assets	400014	441102	424019	428350	454095	577176
Total Farm Assets	865024	953569	949606	953703	916514	1192627
Total Nonfarm Assets	66594	73948	55480	56781	131500	144795
Total Assets	931618	1027517	1005085	1010484	1048014	1337422
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	608	578	657	510	507	474
Accounts payable	8198	4431	3840	3422	5809	4106
Current notes	22934	18991	38876	31767	14245	3850
Government crop loans	-	1224	-	-	-	4897
Principal due on term debt	25420	20573	20737	23619	21882	10732
Total current farm liabilities	57160	45797	64110	59318	42445	24061
Intermediate Farm Liabilities	81841	83086	98975	86464	49353	75312
Long-term Farm Liabilities	150131	167235	195960	190682	131866	214795
Total Farm Liabilities	289132	296119	359046	336464	223663	314168
Total Nonfarm Liabilities	297	1236	1188	1188	-	1383
Total Deferred Liabilities	4621	5093	-	-	838	-
Total Liabilities	294049	302448	360234	337651	224501	315551
Net Worth (farm and nonfarm)	637569	725069	644852	672833	823513	1021871
Net Worth Change		87500		27981		198358
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	54 %	38 %	55 %	55 %	42 %	16 %
Curr. & Interm Farm Liab. / Assets	30 %	25 %	31 %	28 %	20 %	16 %
Long Term Farm Liabilities / Assets	38 %	38 %	46 %	45 %	29 %	37 %
Total Liabilities / Assets	32 %	29 %	36 %	33 %	21 %	24 %

Table 31. **STATEMENT OF CASH FLOWS, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

		Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms		32	8	8
(a) Beginning cash balance (farm & nonfarm)		11011	8736	18830
CASH FROM OPERATING ACTIVITIES				
Gross cash farm income		353625	317514	390517
Net nonfarm income	(+)	9558	23090	2698
Total cash farm expense	(-)	270992	260995	263871
Apparent family living expense	(-)	49882	28757	89249
Income and social security tax	(-)	2037	1121	967
(b) Cash from operations	(=)	40272	49730	39129
CASH FROM INVESTING ACTIVITIES				
Sale of breeding livestock		1874	857	4955
Sale of machinery & equipment	(+)	12489	42917	4624
Sale of farm land	(+)	-	-	-
Sale of farm buildings	(+)	212	-	849
Sale of other farm assets	(+)	2989	120	340
Sale of nonfarm assets	(+)	2	-	-
Purchase of breeding livestock	(-)	5425	2178	16413
Purchase of machinery & equip.	(-)	39625	56684	62711
Purchase of farm land	(-)	10193	-	36473
Purchase of farm buildings	(-)	22242	150	79201
Purchase of other farm assets	(-)	3556	170	4547
Purchase of nonfarm assets	(-)	791	655	2200
(c) Cash from investing activities	(=)	-64266	-15943	-190776
CASH FROM FINANCING ACTIVITIES				
Money borrowed		93413	24543	195997
Cash gifts and inheritances	(+)	22695	113	83548
Principal payments	(-)	81674	46568	102382
Dividends paid	(-)	-	-	-
Gifts given	(-)	5273	12500	4035
(d) Cash from financing activities	(=)	29162	-34412	173129
(e) Net change in cash balance (b+c+d)		5169	-624	21482
Ending cash balance (farm & nonfarm)		16179	8112	40312

Table 32. **FINANCIAL GUIDELINES MEASURES, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms ))))))))) 32		Average Of Low 25 % ))))))))) 8		Average Of High 25 % ))))))))) 8	
Number of Farms						
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	1.86	2.61	1.82	1.83	2.36	6.30
Working capital	49369	73900	52633	49042	57751	127454
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	34 %	32 %	38 %	35 %	24 %	26 %
Farm equity to asset ratio	66 %	68 %	62 %	65 %	76 %	74 %
Farm debt to equity ratio	51 %	46 %	61 %	55 %	32 %	36 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	7.7 %	8.1 %	-0.6 %	3.0 %	16.3 %	13.7 %
Rate of return on farm equity	9.1 %	9.0 %	-10.3 %	1.2 %	23.9 %	16.7 %
Operating profit margin	14.9 %	24.8 %	-1.4 %	11.1 %	30.0 %	38.8 %
Net farm income	75826	105401	13258	45732	161898	194675
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	147 %	185 %	235 %	202 %	162 %	276 %
Capital replacement margin	14853	26649	28993	21799	17246	48819
EFFICIENCY						
Asset turnover rate (market)	32.7 %		27.3 %		35.2 %	
Operating expense ratio	68.5 %		76.9 %		58.9 %	
Depreciation expense ratio	5.2 %		11.8 %		-0.9 %	
Interest expense ratio	5.1 %		7.1 %		3.1 %	
Net farm income ratio	21.1 %		4.3 %		38.9 %	

LABOR ANALYSIS

	Average Of All Farms ))))))))) 32		Average Of Low 25 % ))))))))) 8		Average Of High 25 % ))))))))) 8	
Number of Farms						
Total unpaid labor hours	5658		4052		8400	
Total hired labor hours	3037		3832		1820	
Total labor hours per farm	8695		7884		10220	
Value of farm production / hour	34.17		32.91		36.37	
Net farm income / unpaid hour	13.40		3.27		19.27	

Table 33. **OPERATOR INFORMATION & NONFARM SUMMARY, 1998**  
**Michigan Dairy Farms, 76 - 120.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	32	8	8
OPERATOR INFORMATION			
Average number of operators	1.6	1.1	2.0
Average age of operators	52.2		
Average number of years farming	29.2		
NONFARM INCOME			
Nonfarm wages & salary	5875	21436	38
Nonfarm business income	-18	-72	-
Nonfarm rental income	1180	1584	-46
Nonfarm interest income	443	65	1144
Nonfarm cash dividends	176	57	638
Tax refunds	636	-5	924
Nontaxable nonfarm income	-	-	-
Gifts and inheritances	22695	113	83548
Other nonfarm income	1267	25	1
Total nonfarm income	32254	23203	86246
NONFARM ASSETS (Mkt)			
	Average Of All Farms Beginning )))))))))	Ending )))))))))	
Checking & savings	25	25	
Stocks & bonds	212	584	
Other current assets	331	48	
Furniture & appliances	2734	2734	
Nonfarm vehicles	2519	3775	
Cash value of life ins.	3854	5122	
Retirement accounts	10035	11302	
Other intermediate assets	12739	14525	
Nonfarm real estate	34145	35833	
Other long term assets	-	-	
Total nonfarm assets	66594	73948	

Table 34. **Livestock and Crop Production Summary, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25 % )))))))))	Average Of High 25 % )))))))))
Dairy			
Number of farms	36	9	9
Avg. number of Cows	160.9	158.8	172.3
Milk produced per Cow	20,771	18,854	21,847
Percent of barn capacity	102.7	118.7	95.3
Avg. milk price per cwt.	15.46	15.51	15.45
ACREAGE SUMMARY			
Total Crop Acres	658	667	726
Crop Acres Owned	351	375	440
Crop Acres Cash Rented	303	293	286
Crop Acres Share Rented	3	-	-
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	1.76	-	-
Wheat, Winter per bu.	2.44	-	-
AVERAGE YIELD PER ACRE			
Hay, Alfalfa (ton)	3.34	-	3.81
Corn (bu.)	94.06	93.52	108.16
Corn Silage (ton)	11.96	10.17	14.73
Haylage, Alfalfa (ton)	4.86	-	-
Wheat, Winter (bu.)	41.05	-	-
Hay, Native Grass (ton)	1.09	-	-
Soybeans (bu.)	39.13	-	-

Table 35. **FARM INCOME STATEMENT, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	36	9	9
CASH FARM INCOME			
Green Beans	157	-	629
Cordwood	125	-	-
Corn	1819	961	2161
Seed Corn	50	199	-
Mixed Hay	381	-	3
Mixed Haylage	90	-	-
Maple Syrup	0	-	-
Soybeans	4429	2915	2886
Straw	120	-	-
Sugar Beets	1894	-	7576
Winter Wheat	1550	308	1956
Milk	516757	464316	581579
Dairy Calves	1924	2220	1585
Dairy Replacement Heifers	233	87	390
Dairy Steers	8808	9887	6378
Finish Feeder Pigs	5	-	20
Cull breeding livestock	19618	21345	20683
Misc. livestock income	0	-	-
Transition payments	552	-	-
Other government payments	13931	16089	14529
Custom work income	1169	432	739
Patronage dividends, cash	1867	2735	1582
Insurance income	2437	1378	1074
Other farm income	3185	2037	1883
Gross Cash Farm Income	581101	524909	645654

Table 36. **FARM INCOME STATEMENT, 1998 (Continued)**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ))))))))) 36	Average Of Low 25% ))))))))) 9	Average Of High 25% ))))))))) 9
<b>CASH FARM EXPENSE</b>			
Seed	13373	14256	13897
Fertilizer	21267	18301	21418
Crop chemicals	9757	9050	11380
Crop insurance	339	287	257
Drying fuel	8	3	-
Irrigation energy	274	1097	-
Crop miscellaneous	1306	1616	1897
Feeder livestock purchase	2	-	8
Purchased feed	130226	116460	114004
Breeding fees	4814	3896	7378
Veterinary	18292	16992	16109
Livestock supplies	19919	17793	21719
Livestock leases	1488	4228	1600
Livestock marketing	19168	19983	23085
Interest	25667	33698	16767
Fuel & oil	12304	14013	12541
Repairs	37654	37614	42467
Custom hire	10581	5758	17513
Hired labor	74941	65545	96702
Land rent	14398	10428	10962
Machinery & bldg leases	3579	3752	1179
Real estate taxes	6636	4700	5992
Personal property taxes	7	-	-
Farm insurance	7231	8372	7494
Utilities	12274	11905	14230
Dues & professional fees	3618	5612	3173
Miscellaneous	19804	20020	19282
Total cash expense	468928	445379	481054
Net cash farm income	112173	79531	164600
<b>INVENTORY CHANGES</b>			
Crops and feed	-827	-21242	6721
Market livestock	-1029	-1071	93
Accounts receivable	3580	4976	4412
Prepaid expenses and supplies	7049	6050	1629
Accounts payable	6085	1500	6715
Total inventory change	14858	-9787	19570
Net operating profit	127031	69744	184170
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	17358	-260	37671
Machinery and equipment	-25074	-24076	-19920
Buildings and improvements	-15024	-10136	-12968
Other farm capital	652	-443	1247
Total depr. and other capital adj	-22088	-34915	6030
Net farm income	104943	34829	190200

Table 37. **INVENTORY CHANGES, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	36	9	9
Net cash farm income	112173	79531	164600
CROPS AND FEED			
Ending inventory	113064	97338	135809
Beginning inventory	113891	118580	129088
Inventory change	-827	-21242	6721
MARKET LIVESTOCK			
Ending inventory	4983	3654	972
Beginning inventory	6012	4725	879
Inventory change	-1029	-1071	93
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	23864	24132	19623
Beginning inventory	20284	19156	15211
Inventory change	3580	4976	4412
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	16896	10675	6988
Beginning inventory	9848	4625	5359
Inventory change	7049	6050	1629
ACCOUNTS PAYABLE			
Beginning inventory	14798	9400	13312
Ending inventory	8713	7900	6596
Inventory change	6085	1500	6715
Total inventory change	14858	-9787	19570
Net operating profit	127031	69744	184170



Table 38. **DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	36	9	9
Net operating profit	127031	69744	184170
BREEDING LIVESTOCK			
Ending inventory	294560	243383	333211
Capital sales	937	1650	612
Beginning inventory	266117	235764	289273
Capital purchases	12021	9529	6879
Depreciation, capital adj.	17358	-260	37671
MACHINERY AND EQUIPMENT			
Ending inventory	148821	169770	188001
Capital sales	7400	760	3282
Beginning inventory	129657	148388	167110
Capital purchases	51638	46218	44093
Depreciation, capital adj.	-25074	-24076	-19920
BUILDINGS AND IMPROVEMENTS			
Ending inventory	98031	50999	92610
Capital sales	-	-	-
Beginning inventory	87149	49351	89493
Capital purchases	25906	11784	16085
Depreciation, capital adj.	-15024	-10136	-12968
OTHER CAPITAL ASSETS			
Ending inventory	19364	28797	7169
Capital sales	6736	13495	4647
Beginning inventory	18196	29389	10296
Capital purchases	7252	13346	272
Depreciation, capital adj.	652	-443	1247
Total depreciation, capital adj.	-22088	-34915	6030
Net farm income	104943	34829	190200

Table 39. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms ))))))	Avg. Of Low 25% ))))))	Avg. Of High 25% ))))))	Avg. Of All Farms ))))))	Avg. Of Low 25% ))))))	Avg. Of High 25% ))))))
Number of Farms	36	9	9	36	9	9
PROFITABILITY	----- Cost -----			----- Market -----		
Net farm income	104943	34829	190200	139174	59770	229636
Labor and management earnings	75095	15555	146860	86051	13636	170828
Rate of return on assets	8.4 %	2.0 %	15.7 %	8.5 %	3.3 %	15.6 %
Rate of return on equity	9.6 %	-5.7 %	18.3 %	9.2 %	1.0 %	17.5 %
Operating profit margin	15.4 %	4.1 %	25.6 %	22.7 %	10.4 %	32.4 %
Asset turnover rate	54.5 %	49.7 %	61.4 %	37.5 %	31.4 %	48.2 %
Interest on farm net worth	29848	19274	43339	53124	46133	58809
Farm interest expense	25166	33469	16496	25166	33469	16496
Value of operator lbr and mgmt.	57547	52440	58130	57547	52440	58130
Return on farm assets	72562	15857	148566	106793	40799	188003
Average farm assets	862547	786675	945931	1253526	1246549	1203751
Return on farm equity	47396	-17612	132070	81627	7330	171507
Average farm equity	494416	309017	722323	885395	768891	980143
Value of farm production	469956	390853	580539	469956	390853	580539
	Average Of All Farms ))))))			Average Of Low 25% ))))))		
Number of Farms	36			9		
LIQUIDITY (Cash)						
Net cash farm income		112173	79531		164600	
Net nonfarm income		5772	12720		2638	
Family living and taxes		54465	42875		70392	
Real estate principal payments		13430	21307		11592	
Cash available for interm. debt		50049	28069		85255	
Average intermediate debt		135838	161684		101688	
Years to turnover interm. debt		2.7	5.8		1.2	
Expense as a % of income		81 %	85 %		75 %	
Interest as a % of income		4 %	6 %		3 %	
LIQUIDITY (Accrual)						
Total accrual farm income		582825	507572		656880	
Total accrual farm expense		455795	437829		472710	
Net accrual operating income		127031	69744		184170	
Net nonfarm income		5772	12720		2638	
Family living and taxes		54465	42875		70392	
Real estate principal payments		13430	21307		11592	
Available for intermediate debt		64907	18282		104825	
Average intermediate debt		135838	161684		101688	
Years to turnover interm. debt		2.1	8.8		1.0	
Expense as a % of income		78 %	86 %		72 %	
Interest as a % of income		4 %	7 %		3 %	

Table 40. **BALANCE SHEET AT COST VALUES, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ))))))))) 36		Average Of Low 25 % ))))))))) 9		Average Of High 25 % ))))))))) 9	
	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))	Beginning )))))))))	Ending )))))))))
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	8357	13267	1890	4291	10880	21558
Prepaid expenses & supplies	9848	16896	4625	10675	5359	6988
Growing crops	9169	9654	9981	10164	8401	8732
Accounts receivable	10021	13210	8847	13968	2810	6891
Hedging accounts	1000	1000	-	-	4000	4000
Crops held for sale or feed	113891	113064	118580	97338	129088	135809
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	6012	4983	4725	3654	879	972
Other current assets	94	-	328	-	-	-
Total current farm assets	158391	172074	148977	140090	161418	184950
Intermediate Farm Assets						
Breeding livestock	266117	294560	235764	243383	289273	333211
Machinery and equipment	129657	148821	148388	169770	167110	188001
Other intermediate assets	13674	16315	20923	25460	8943	6369
Total intermediate farm assets	409449	459695	405075	438613	465325	527580
Long-Term Farm Assets						
Farm land	167162	165572	162698	165744	196842	171489
Buildings and improvements	87149	98031	49351	50999	89493	92610
Other long-term assets	4521	3050	8466	3338	1354	800
Total long-term farm assets	258832	266652	220516	220081	287689	264899
Total Farm Assets	826673	898422	774567	798783	914432	977429
Total Nonfarm Assets	54373	57219	29179	29572	87711	96499
Total Assets	881045	955641	803746	828355	1002143	1073928
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	1558	1056	2023	1794	867	596
Accounts payable	13240	7657	7377	6106	12444	6000
Current notes	34723	42107	51435	28997	7546	3952
Government crop loans	-	-	-	-	-	-
Principal due on term debt	33445	35646	39122	27931	35658	39287
Total current farm liabilities	82966	86477	99956	64829	56516	49879
Intermediate Farm Liabilities	112201	117015	135655	152335	82342	73357
Long-term Farm Liabilities	164916	172687	244538	258002	98605	86517
Total Farm Liabilities	360083	376179	480149	475166	237462	209753
Total Nonfarm Liabilities	2080	2774	3819	2118	-	4889
Total Liabilities	362164	378954	483969	477284	237462	214642
Net Worth (farm and nonfarm)	518882	576687	319777	351071	764680	859286
Net Worth Change		57805		31294		94605
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	52 %	50 %	67 %	46 %	35 %	27 %
Curr. & Interm Farm Liab / Assets	34 %	32 %	43 %	38 %	22 %	17 %
Long Term Farm Liab. / Assets	64 %	65 %	111 %	117 %	34 %	33 %
Total Liabilities / Assets	41 %	40 %	60 %	58 %	24 %	20 %

Table 41. **BALANCE SHEET AT MARKET VALUES, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ) ) ) ) ) ) ) ) ) ) 36		Average Of Low 25 % ) ) ) ) ) ) ) ) ) ) 9		Average Of High 25 % ) ) ) ) ) ) ) ) ) ) 9	
	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	8357	13267	1890	4291	10880	21558
Prepaid expenses & supplies	9848	16896	4625	10675	5359	6988
Growing crops	9169	9654	9981	10164	8401	8732
Accounts receivable	10021	13210	8847	13968	2810	6891
Hedging accounts	1000	1000	-	-	4000	4000
Crops held for sale or feed	113891	113064	118580	97338	129088	135809
Crops under government loan	-	-	-	-	-	-
Market livestock held for sale	6012	4983	4725	3654	879	972
Other current assets	94	-	328	-	-	-
Total current farm assets	158391	172074	148977	140090	161418	184950
Intermediate Farm Assets						
Breeding livestock	266117	294540	235764	243306	289272	333211
Machinery and equipment	238456	264395	252090	271197	238508	258100
Other intermediate assets	14327	16801	20923	25460	8943	6369
Total intermediate farm assets	518901	575736	508777	539963	536722	597679
Long-Term Farm Assets						
Farm land	418833	440944	426927	456695	407207	410483
Buildings and improvements	98501	113363	123268	125486	45833	61056
Other long-term assets	5910	4399	14022	8893	1354	800
Total long-term farm assets	523244	558706	564217	591075	454394	472338
Total Farm Assets	1200536	1306517	1221970	1271127	1152534	1254968
Total Nonfarm Assets	76809	86515	78007	86353	97956	128511
Total Assets	1277345	1393032	1299977	1357480	1250489	1383479
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	1558	1056	2023	1794	867	596
Accounts payable	13240	7657	7377	6106	12444	6000
Current notes	34723	42107	51435	28997	7546	3952
Government crop loans	-	-	-	-	-	-
Principal due on term debt	33445	35646	39122	27931	35658	39287
Total current farm liabilities	82966	86477	99956	64829	56516	49879
Intermediate Farm Liabilities	112201	117015	135655	152335	82342	73357
Long-term Farm Liabilities	164916	172687	244538	258002	98605	86517
Total Farm Liabilities	360083	376179	480149	475166	237462	209753
Total Nonfarm Liabilities	2080	2774	3819	2118	-	4889
Total Deferred Liabilities	-	-	-	-	-	-
Total Liabilities	362164	378954	483969	477284	237462	214642
Net Worth (farm and nonfarm)	915181	1014078	816008	880196	1013027	1168837
Net Worth Change		98897		64188		155810
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	52 %	50 %	67 %	46 %	35 %	27 %
Curr. & Inter Farm Liab. / Assets	29 %	27 %	36 %	32 %	20 %	16 %
Long Term Farm Liabilities / Assets	32 %	31 %	43 %	44 %	22 %	18 %
Total Liabilities / Assets	28 %	27 %	37 %	35 %	19 %	16 %

Table 42. **STATEMENT OF CASH FLOWS, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

		Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms		36	9	9
(a) Beginning cash balance (farm & nonfarm)		9545	6643	10880
CASH FROM OPERATING ACTIVITIES				
Gross cash farm income		581101	524909	645654
Net nonfarm income	(+)	5772	12720	2638
Total cash farm expense	(-)	468928	445379	481054
Apparent family living expense	(-)	51510	40009	69373
Income and social security tax	(-)	2956	2866	1019
(b) Cash from operations	(=)	63479	49376	96846
CASH FROM INVESTING ACTIVITIES				
Sale of breeding livestock		937	1650	612
Sale of machinery & equipment	(+)	7400	760	3282
Sale of farm land	(+)	748	2993	-
Sale of farm buildings	(+)	-	-	-
Sale of other farm assets	(+)	6736	13495	4647
Sale of nonfarm assets	(+)	93	-	-
Purchase of breeding livestock	(-)	12021	9529	6879
Purchase of machinery & equip.	(-)	51638	46218	44093
Purchase of farm land	(-)	4583	2222	-
Purchase of farm buildings	(-)	25906	11784	16085
Purchase of other farm assets	(-)	7252	13346	272
Purchase of nonfarm assets	(-)	1674	1806	4889
(c) Cash from investing activities	(=)	-87160	-66007	-63677
CASH FROM FINANCING ACTIVITIES				
Money borrowed		136456	126643	39878
Cash gifts and inheritances	(+)	8850	22557	5887
Principal payments	(-)	113619	131597	56161
Dividends paid	(-)	-	-	-
Gifts given	(-)	3477	101	12096
(d) Cash from financing activities	(=)	28209	17502	-22491
(e) Net change in cash balance (b+c+d)		4528	870	10677
Ending cash balance (farm & nonfarm)		14073	7513	21558

Table 43. **FINANCIAL GUIDELINES MEASURES, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms ))))))))) 36		Average Of Low 25 % ))))))))) 9		Average Of High 25 % ))))))))) 9	
Number of Farms						
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	1.91	1.99	1.49	2.16	2.86	3.71
Working capital	75425	85597	49020	75261	104902	135071
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	30 %	29 %	39 %	37 %	21 %	17 %
Farm equity to asset ratio	70 %	71 %	61 %	63 %	79 %	83 %
Farm debt to equity ratio	43 %	40 %	65 %	60 %	26 %	20 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	8.4 %	8.5 %	2.0 %	3.3 %	15.7 %	15.6 %
Rate of return on farm equity	9.6 %	9.2 %	-5.7 %	1.0 %	18.3 %	17.5 %
Operating profit margin	15.4 %	22.7 %	4.1 %	10.4 %	25.6 %	32.4 %
Net farm income	104943	139174	34829	59770	190200	229636
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	162 %	194 %	113 %	97 %	258 %	309 %
Capital replacement margin	29211	44069	7685	-2103	61188	80759
EFFICIENCY						
Asset turnover rate (market)	37.5 %		31.4 %		48.2 %	
Operating expense ratio	73.9 %		79.7 %		69.5 %	
Depreciation expense ratio	3.8 %		6.9 %		-0.9 %	
Interest expense ratio	4.3 %		6.6 %		2.5 %	
Net farm income ratio	18.0 %		6.9 %		29.0 %	

LABOR ANALYSIS

	Average Of All Farms ))))))))) 36		Average Of Low 25 % ))))))))) 9		Average Of High 25 % ))))))))) 9	
Number of Farms						
Total unpaid labor hours	5344		5302		4290	
Total hired labor hours	7417		6308		9322	
Total labor hours per farm	12761		11610		13612	
Value of farm production / hour	36.83		33.67		42.65	
Net farm income / unpaid hour	19.64		6.57		44.34	

Table 44. **OPERATOR INFORMATION & NONFARM SUMMARY, 1998**  
**Michigan Dairy Farms, 121 - 200.9 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	36	9	9
OPERATOR INFORMATION			
Average number of operators	1.7	1.8	1.7
Average age of operators	49.8	58.6	44.7
Average number of years farming	22.4	30.1	14.4
NONFARM INCOME			
Nonfarm wages & salary	2238	6093	-
Nonfarm business income	-	-	-
Nonfarm rental income	489	-	1049
Nonfarm interest income	772	1374	763
Nonfarm cash dividends	147	323	131
Tax refunds	407	929	8
Nontaxable nonfarm income	-	-	-
Gifts and inheritances	8850	22557	5887
Other nonfarm income	1718	4001	687
Total nonfarm income	14621	35277	8526
NONFARM ASSETS (Mkt)			
	Average Of All Farms Beginning Ending ))))))))) )))))))		
Checking & savings	1188	806	
Stocks & bonds	12472	14506	
Other current assets	7061	7226	
Furniture & appliances	2472	2472	
Nonfarm vehicles	4361	3931	
Cash value of life ins.	3543	4937	
Retirement accounts	10658	8335	
Other intermediate assets	2040	3927	
Nonfarm real estate	33014	39681	
Other long term assets	-	694	
Total nonfarm assets	76809	86515	

Table 45. **Livestock and Crop Production Summary, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25 % )))))))))	Average Of High 25 % )))))))))
Dairy			
Number of farms	48	12	12
Avg. number of Cows	391.3	358.0	639.3
Milk produced per Cow	21,711	20,223	22,308
Percent of barn capacity	98.7	94.8	93.6
Avg. milk price per cwt.	15.22	15.47	15.29
ACREAGE SUMMARY			
Total Crop Acres	986	958	1408
Crop Acres Owned	602	651	831
Crop Acres Cash Rented	384	308	577
Crop Acres Share Rented	-	-	-
AVERAGE PRICE RECEIVED (Cash Sales Only)			
Corn per bu.	2.03	-	-
Soybeans per bu.	5.63	-	-
Wheat, Winter per bu.	2.13	-	-
AVERAGE YIELD PER ACRE			
Corn Silage (ton)	15.74	14.59	17.36
Corn (bu.)	132.86	-	139.01
Haylage, Alfalfa (ton)	6.48	6.13	-
Hay, Alfalfa (ton)	4.63	-	-
Soybeans (bu.)	48.19	-	-
Wheat, Winter (bu.)	50.55	-	-



Table 46. **FARM INCOME STATEMENT, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	48	12	12
CASH FARM INCOME			
Cordwood	37	148	-
Corn	9169	20412	4556
Corn Silage	760	998	1416
Mixed Hay	670	172	1426
Alfalfa Haylage	233	931	-
Mixed Haylage	324	-	-
Popcorn	322	-	1289
Sorghum Silage	8	-	-
Soybeans	8458	8613	20713
Straw	0	-	-
Winter Wheat	2988	2477	6618
Beef Calves	14	57	-
Background Beef	1214	-	455
Milk	1293280	1119967	2180030
Dairy Calves	5407	3470	11093
Dairy Replacement Heifers	2176	466	7567
Dairy Steers	13459	13755	14104
Raised Hogs	28	-	-
Cull breeding livestock	38557	27831	69200
Misc. livestock income	64	-	29
Transition payments	1876	3208	3222
CRP payments	349	-	-
Other government payments	33314	30990	53878
Custom work income	18409	2128	57136
Patronage dividends, cash	7325	8267	9545
Insurance income	2879	7803	529
Cash from hedging accts	-682	-	-
Other farm income	16640	12456	39241
Gross Cash Farm Income	1457279	1264147	2482048

Table 47. **FARM INCOME STATEMENT, 1998 (Continued)**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ))))))))) 48	Average Of Low 25% ))))))))) 12	Average Of High 25% ))))))))) 12
<b>CASH FARM EXPENSE</b>			
Seed	25245	24247	34101
Fertilizer	48797	37594	64688
Crop chemicals	22218	23672	31525
Crop insurance	757	2731	143
Drying fuel	597	824	99
Irrigation energy	204	-	436
Crop marketing	929	2986	573
Crop miscellaneous	1493	376	3709
Feeder livestock purchase	1116	-	4465
Purchased feed	349986	322916	575381
Breeding fees	8929	5507	15009
Veterinary	48207	45528	75553
Livestock supplies	54337	44508	99673
Livestock leases	6135	18664	4558
Livestock marketing	40027	32406	65728
Interest	80032	101551	121601
Fuel & oil	20210	21458	26669
Repairs	67903	62430	104084
Custom hire	29703	33295	46247
Hired labor	187354	174516	315666
Land rent	42603	37321	84025
Machinery & bldg leases	28150	24570	69409
Real estate taxes	10287	10067	14287
Personal property taxes	17	35	-
Farm insurance	14066	16483	18257
Utilities	28512	27157	41811
Dues & professional fees	7446	10542	9318
Hedging account deposits	3235	-	-
Miscellaneous	62005	49379	112303
Total cash expense	1190499	1130762	1939320
Net cash farm income	266780	133385	542727
<b>INVENTORY CHANGES</b>			
Crops and feed	24670	115	111736
Market livestock	14	-239	856
Accounts receivable	20828	8091	46765
Prepaid expenses and supplies	15113	2277	30460
Accounts payable	12702	2130	18510
Total inventory change	73328	12373	208327
Net operating profit	340107	145758	751055
<b>DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS</b>			
Breeding livestock	4417	-43955	26452
Machinery and equipment	-74599	-55184	-124292
Buildings and improvements	-41899	-51562	-64899
Other farm capital	-14427	-1507	-54359
Total depr. and other capital adj	-126508	-152209	-217098
Net farm income	213599	-6451	533957

Table 48. **INVENTORY CHANGES, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	48	12	12
Net cash farm income	266780	133385	542727
CROPS AND FEED			
Ending inventory	260535	241278	470658
Beginning inventory	235865	241163	358922
Inventory change	24670	115	111736
MARKET LIVESTOCK			
Ending inventory	16135	11218	35943
Beginning inventory	16121	11457	35086
Inventory change	14	-239	856
ACCTS RECEIVABLE & OTHER CURRENT ASSETS			
Ending inventory	81446	54079	168343
Beginning inventory	60618	45988	121578
Inventory change	20828	8091	46765
PREPAID EXPENSES AND SUPPLIES			
Ending inventory	49753	8271	119596
Beginning inventory	34639	5995	89136
Inventory change	15113	2277	30460
ACCOUNTS PAYABLE			
Beginning inventory	46843	67309	57976
Ending inventory	34141	65178	39466
Inventory change	12702	2130	18510
Total inventory change	73328	12373	208327
Net operating profit	340107	145758	751055

Table 49. **DEPRECIATION AND OTHER CAPITAL ADJUSTMENTS, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	48	12	12
Net operating profit	340107	145758	751055
BREEDING LIVESTOCK			
Ending inventory	697858	617068	1199310
Capital sales	12768	18408	22883
Beginning inventory	621573	570994	1020258
Capital purchases	84636	108437	175483
Depreciation, capital adj.	4417	-43955	26452
MACHINERY AND EQUIPMENT			
Ending inventory	358375	208749	695058
Capital sales	17317	46838	20478
Beginning inventory	332358	215036	615910
Capital purchases	117934	95735	223917
Depreciation, capital adj.	-74599	-55184	-124292
BUILDINGS AND IMPROVEMENTS			
Ending inventory	259818	364296	378575
Capital sales	229	833	-
Beginning inventory	267140	373304	373451
Capital purchases	34806	43387	70023
Depreciation, capital adj.	-41899	-51562	-64899
OTHER CAPITAL ASSETS			
Ending inventory	77355	55494	197427
Capital sales	10826	2942	16971
Beginning inventory	39771	37696	67454
Capital purchases	62838	22248	201303
Depreciation, capital adj.	-14427	-1507	-54359
Total depreciation, capital adj.	-126508	-152209	-217098
Net farm income	213599	-6451	533957

Table 50. **PROFITABILITY AND LIQUIDITY ANALYSIS, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

	Avg. Of All Farms )))))))))	Avg. Of Low 25% )))))))))	Avg. Of High 25% )))))))))	Avg. Of All Farms )))))))))	Avg. Of Low 25% )))))))))	Avg. Of High 25% )))))))))
Number of Farms	48	12	12	48	12	12
PROFITABILITY	----- Cost -----			----- Market -----		
Net farm income	213599	-6451	533957	290000	112025	583921
Labor and management earnings	156595	-43533	436287	201023	45347	442616
Rate of return on assets	10.1 %	0.4 %	16.2 %	10.9 %	5.2 %	14.5 %
Rate of return on equity	13.4 %	-16.4 %	27.0 %	13.6 %	1.8 %	20.4 %
Operating profit margin	17.8 %	0.8 %	26.4 %	24.4 %	13.9 %	28.8 %
Asset turnover rate	56.8 %	47.5 %	61.5 %	44.6 %	37.5 %	50.3 %
Interest on farm net worth	57004	37083	97669	88977	66678	141306
Farm interest expense	80898	105465	121305	80898	105465	121305
Value of operator lbr and mgmt.	88489	92102	103990	88489	92102	103990
Return on farm assets	206008	6913	551272	282409	125389	601237
Average farm assets	2037090	1905854	3394715	2592412	2415183	4155057
Return on farm equity	125110	-98553	429967	201512	19923	479932
Average farm equity	935793	601968	1594754	1482949	1111296	2355095
Value of farm production	1156106	905242	2088012	1156106	905242	2088012
	Average Of All Farms )))))))))			Average Of Low 25% )))))))))		
Number of Farms	48			12		
LIQUIDITY (Cash)	Average Of All Farms )))))))))			Average Of High 25% )))))))))		
Net cash farm income	266780			133385		
Net nonfarm income	13978			4074		
Family living and taxes	80638			47947		
Real estate principal payments	42103			32151		
Cash available for interm. debt	158016			57361		
Average intermediate debt	400486			483780		
Years to turnover interm. debt	2.5			8.4		
Expense as a % of income	82 %			89 %		
Interest as a % of income	5 %			8 %		
LIQUIDITY (Accrual)	Average Of All Farms )))))))))			Average Of Low 25% )))))))))		
Total accrual farm income	1502791			1272114		
Total accrual farm expense	1162684			1126356		
Net accrual operating income	340107			145758		
Net nonfarm income	13978			4074		
Family living and taxes	80638			47947		
Real estate principal payments	42103			32151		
Available for intermediate debt	231343			69734		
Average intermediate debt	400486			483780		
Years to turnover interm. debt	1.7			6.9		
Expense as a % of income	77 %			89 %		
Interest as a % of income	5 %			8 %		

Table 51. **BALANCE SHEET AT COST VALUES, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ) ) ) ) ) ) ) ) ) ) 48		Average Of Low 25 % ) ) ) ) ) ) ) ) ) ) 12		Average Of High 25 % ) ) ) ) ) ) ) ) ) ) 12	
	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	12390	35108	-3832	21095	18917	53482
Prepaid expenses & supplies	34639	49753	5995	8271	89136	119596
Growing crops	11102	11989	10704	10882	12432	12533
Accounts receivable	42890	57669	34619	41364	85522	115838
Hedging accounts	-	200	-	-	-	-
Crops held for sale or feed	232819	259147	241163	241278	358922	470658
Crops under government loan	3046	1388	-	-	-	-
Market livestock held for sale	16121	16135	11457	11218	35086	35943
Other current assets	6627	11589	665	1833	23624	39972
Total current farm assets	359633	442976	300771	335941	623639	848022
Intermediate Farm Assets						
Breeding livestock	621573	697858	570994	617068	1020258	1199310
Machinery and equipment	332358	358375	215036	208749	615910	695058
Other intermediate assets	30198	68132	27379	45149	43594	176298
Total intermediate farm assets	984129	1124366	813409	870965	1679762	2070666
Long-Term Farm Assets						
Farm land	303372	313950	365818	366542	388671	381657
Buildings and improvements	267140	259818	373304	364296	373451	378575
Other long-term assets	9573	9223	10317	10346	23859	21129
Total long-term farm assets	580085	582991	749439	741184	785981	781361
Total Farm Assets	1923847	2150333	1863619	1948090	3089383	3700048
Total Nonfarm Assets	61412	64536	19473	18781	75333	69739
Total Assets	1985259	2214869	1883092	1966871	3164716	3769787
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	1596	2461	2193	6108	2229	1932
Accounts payable	45247	31680	65115	59071	55747	37534
Current notes	97376	95712	191484	165902	88701	92315
Government crop loans	2218	1263	-	-	-	-
Principal due on term debt	96743	96410	107004	141107	143447	122339
Total current farm liabilities	243194	227540	365797	372194	290124	254120
Intermediate Farm Liabilities	306942	369184	318827	467573	537534	668319
Long-term Farm Liabilities	506219	549516	553420	529961	860977	988850
Total Farm Liabilities	1056354	1146240	1238045	1369728	1688635	1911289
Total Nonfarm Liabilities	25679	11371	30820	30820	59341	2175
Total Liabilities	1082033	1157611	1268865	1400548	1747976	1913464
Net Worth (farm and nonfarm)	903226	1057258	614227	566323	1416740	1856323
Net Worth Change		154032		-47904		439583
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	68 %	51 %	122 %	111 %	47 %	30 %
Curr. & Interm Farm Liab / Assets	41 %	38 %	61 %	70 %	36 %	32 %
Long Term Farm Liab. / Assets	87 %	94 %	74 %	72 %	110 %	127 %
Total Liabilities / Assets	55 %	52 %	67 %	71 %	55 %	51 %

Table 52. **BALANCE SHEET AT MARKET VALUES, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

Number of Farms	Average Of All Farms ) ) ) ) ) ) ) ) ) ) 48		Average Of Low 25 % ) ) ) ) ) ) ) ) ) ) 12		Average Of High 25 % ) ) ) ) ) ) ) ) ) ) 12	
	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )	Beginning ) ) ) ) ) ) ) ) ) )	Ending ) ) ) ) ) ) ) ) ) )
<b>ASSETS</b>						
Current Farm Assets						
Cash and checking balance	12390	35108	-3832	21095	18917	53482
Prepaid expenses & supplies	34639	49753	5995	8271	89136	119596
Growing crops	11102	11989	10704	10882	12432	12533
Accounts receivable	42890	57669	34619	41364	85522	115838
Hedging accounts	-	200	-	-	-	-
Crops held for sale or feed	232819	259147	241163	241278	358922	470658
Crops under government loan	3046	1388	-	-	-	-
Market livestock held for sale	16121	16135	11457	11218	35086	35943
Other current assets	6627	11589	665	1833	23624	39972
Total current farm assets	359633	442976	300771	335941	623639	848022
Intermediate Farm Assets						
Breeding livestock	629776	706551	570994	617068	1020258	1199310
Machinery and equipment	445257	498211	400355	410994	674561	805110
Other intermediate assets	57246	96215	27379	46403	151314	286183
Total intermediate farm assets	1132279	1300977	998729	1074465	1846133	2290603
Long-Term Farm Assets						
Farm land	617790	657635	636526	716439	839068	833864
Buildings and improvements	321446	333243	367366	379466	492043	491755
Other long-term assets	9597	9247	10317	10346	23859	21129
Total long-term farm assets	948833	1000125	1014210	1106250	1354969	1346747
Total Farm Assets	2440745	2744078	2313709	2516656	3824742	4485372
Total Nonfarm Assets	100519	107611	119624	131307	89937	76054
Total Assets	2541264	2851689	2433333	2647964	3914679	4561426
<b>LIABILITIES</b>						
Current Farm Liabilities						
Accrued interest	1596	2461	2193	6108	2229	1932
Accounts payable	45247	31680	65115	59071	55747	37534
Current notes	97376	95712	191484	165902	88701	92315
Government crop loans	2218	1263	-	-	-	-
Principal due on term debt	96743	96410	107004	141107	143447	122339
Total current farm liabilities	243194	227540	365797	372194	290124	254120
Intermediate Farm Liabilities	306942	369184	318827	467573	537534	668319
Long-term Farm Liabilities	506219	549516	553420	529961	860977	988850
Total Farm Liabilities	1056354	1146240	1238045	1369728	1688635	1911289
Total Nonfarm Liabilities	25679	11371	30820	30820	59341	2175
Total Deferred Liabilities	7943	8389	-	-	-	-
Total Liabilities	1089976	1166001	1268865	1400548	1747976	1913464
Net Worth (farm and nonfarm)	1451288	1685689	1164468	1247416	2166703	2647962
Net Worth Change		234400		82947		481259
<b>RATIO ANALYSIS</b>						
Current Farm Liabilities / Assets	68 %	51 %	122 %	111 %	47 %	30 %
Curr. & Inter Farm Liab. / Assets	37 %	34 %	53 %	60 %	34 %	29 %
Long Term Farm Liabilities / Assets	53 %	55 %	55 %	48 %	64 %	73 %
Total Liabilities / Assets	43 %	41 %	52 %	53 %	45 %	42 %

Table 53. **STATEMENT OF CASH FLOWS, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

		Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms		48	12	12
(a) Beginning cash balance (farm & nonfarm)		12390	-3832	18917
CASH FROM OPERATING ACTIVITIES				
Gross cash farm income		1457279	1264147	2482048
Net nonfarm income	(+)	13978	4074	35125
Total cash farm expense	(-)	1190499	1130762	1939320
Apparent family living expense	(-)	75296	47905	121101
Income and social security tax	(-)	5342	42	8151
(b) Cash from operations	(=)	200119	89513	448600
CASH FROM INVESTING ACTIVITIES				
Sale of breeding livestock		12768	18408	22883
Sale of machinery & equipment	(+)	17317	46838	20478
Sale of farm land	(+)	8618	-	25281
Sale of farm buildings	(+)	229	833	-
Sale of other farm assets	(+)	10826	2942	16971
Sale of nonfarm assets	(+)	522	-	-
Purchase of breeding livestock	(-)	84636	108437	175483
Purchase of machinery & equip.	(-)	117934	95735	223917
Purchase of farm land	(-)	16502	-	17879
Purchase of farm buildings	(-)	34806	43387	70023
Purchase of other farm assets	(-)	62838	22248	201303
Purchase of nonfarm assets	(-)	1269	-	167
(c) Cash from investing activities	(=)	-267704	-200785	-603161
CASH FROM FINANCING ACTIVITIES				
Money borrowed		394610	573154	564574
Cash gifts and inheritances	(+)	8808	12086	12135
Principal payments	(-)	306013	439341	379250
Dividends paid	(-)	-	-	-
Gifts given	(-)	7104	9700	8333
(d) Cash from financing activities	(=)	90302	136200	189126
(e) Net change in cash balance (b+c+d)		22717	24927	34565
Ending cash balance (farm & nonfarm)		35108	21095	53482



Table 54. **FINANCIAL GUIDELINES MEASURES, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms ) ) ) ) ) ) ) ) ) ) 48		Average Of Low 25 % ) ) ) ) ) ) ) ) ) ) 12		Average Of High 25 % ) ) ) ) ) ) ) ) ) ) 12	
Number of Farms						
LIQUIDITY	Beginning	Ending	Beginning	Ending	Beginning	Ending
Current ratio	1.48	1.95	0.82	0.90	2.15	3.34
Working capital	116440	215437	-65026	-36253	333515	593902
SOLVENCY (Market)	Beginning	Ending	Beginning	Ending	Beginning	Ending
Farm debt to asset ratio	44 %	42 %	54 %	54 %	44 %	43 %
Farm equity to asset ratio	56 %	58 %	46 %	46 %	56 %	57 %
Farm debt to equity ratio	77 %	73 %	115 %	119 %	79 %	74 %
PROFITABILITY	Cost	Market	Cost	Market	Cost	Market
Rate of return on farm assets	10.1 %	10.9 %	0.4 %	5.2 %	16.2 %	14.5 %
Rate of return on farm equity	13.4 %	13.6 %	-16.4 %	1.8 %	27.0 %	20.4 %
Operating profit margin	17.8 %	24.4 %	0.8 %	13.9 %	26.4 %	28.8 %
Net farm income	213599	290000	-6451	112025	533957	583921
REPAYMENT CAPACITY	Cash	Accrual	Cash	Accrual	Cash	Accrual
Term debt coverage ratio	174 %	227 %	88 %	96 %	224 %	313 %
Capital replacement margin	100322	173650	-17491	-5119	293104	501431
EFFICIENCY						
Asset turnover rate (market)	44.6 %		37.5 %		50.3 %	
Operating expense ratio	72.0 %		80.3 %		67.0 %	
Depreciation expense ratio	8.4 %		12.0 %		8.2 %	
Interest expense ratio	5.4 %		8.3 %		4.6 %	
Net farm income ratio	14.2 %		-0.5 %		20.2 %	

LABOR ANALYSIS

	Average Of All Farms ) ) ) ) ) ) ) ) ) ) 48		Average Of Low 25 % ) ) ) ) ) ) ) ) ) ) 12		Average Of High 25 % ) ) ) ) ) ) ) ) ) ) 12	
Number of Farms						
Total unpaid labor hours	5867		6751		4166	
Total hired labor hours	17191		16027		27711	
Total labor hours per farm	23059		22778		31876	
Value of farm production / hour	50.14		39.74		65.50	
Net farm income / unpaid hour	36.41		-0.96		128.18	

Table 55. **OPERATOR INFORMATION & NONFARM SUMMARY, 1998**  
**Michigan Dairy Farms, 201 - 1,400 Cows**  
(Farms sorted by Net Farm Income)

	Average Of All Farms )))))))))	Average Of Low 25% )))))))))	Average Of High 25% )))))))))
Number of Farms	48	12	12
OPERATOR INFORMATION			
Average number of operators	1.9	2.1	1.8
Average age of operators	47.3	52.2	41.5
Average number of years farming	24.2	32.2	19.5
NONFARM INCOME			
Nonfarm wages & salary	3325	65	12254
Nonfarm business income	2563	-	2922
Nonfarm rental income	1576	2387	1645
Nonfarm interest income	2868	1419	6882
Nonfarm cash dividends	3	-	-
Tax refunds	117	154	80
Nontaxable nonfarm income	-	-	-
Gifts and inheritances	8808	12086	12135
Other nonfarm income	3526	50	11342
Total nonfarm income	22785	16161	47260
NONFARM ASSETS (Mkt)			
	Average Of All Farms Beginning Ending ))))))))) )))))))		
Checking & savings	-	-	
Stocks & bonds	-	-	
Other current assets	474	721	
Furniture & appliances	2104	2104	
Nonfarm vehicles	16744	13813	
Cash value of life ins.	8072	8451	
Retirement accounts	21330	27449	
Other intermediate assets	586	507	
Nonfarm real estate	16180	16214	
Other long term assets	35029	38352	
Total nonfarm assets	100519	107611	

## Per Unit Income and Expense

Table 56 gives the per acre cash income, cash expense and depreciation for 139 of the 154 dairy farms. Fifteen of the 154 did not report any crop acres, so the items in the table are based on the other 139. They had an unweighted average of 673.1 acres. These included owned acres plus land cash and share rented. Table 1 shows most leased ground was cash rented.

Table 56.

### Average Income and Expense Items, Michigan, 1998

#### Per Cow and Per Acre, Dairy Farms

	Number of Cows	186.60	Your
	Number of Acres	<u>673.1</u>	<u>Farm</u>
<b>Income Items per Cow:</b>			
Milk sold		\$3,215	_____
Cull cows, bulls		109	_____
Dairy steers		44	_____
Dairy calves		16	_____
Government		89	_____
Other cash income		192	_____
<b>Expense Items per Cow:</b>			
Purchased feed		\$818	_____
Breeding fees		26	_____
Veterinary		111	_____
Livestock supplies		134	_____
Livestock leases		14	_____
Livestock marketing		107	_____
Interest		201	_____
Fuel and oil		61	_____
Repairs		199	_____
Custom hire		70	_____
Hired labor		435	_____
Leases		57	_____
Real estate taxes		37	_____
Farm insurance		42	_____
Utilities		75	_____
Dues, prof. fees		21	_____
Miscellaneous		156	_____
Machinery depreciation		201	_____
Building depreciation		102	_____
<b>Expense Items per Crop Acre:</b>			
Seed		\$20.88	_____
Fertilizer		36.51	_____
Crop chemicals		18.28	_____
Crop insurance		0.61	_____
Crop miscellaneous		2.25	_____
Land rent		27.15	_____